



## Appendix F - Part 5

Human health risk assessment



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Appendix A

## Sample register

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Sample ID	Location	Date	Time	Coordinates	Area sampled (m2)	Equipment used	Sample mass	Weather	Soil description	Swab Sample
COB_017	Swimming pool - garden bed beside main entrance	7/04/2020	7:45	(-31.4987353, 145.8323848)	0.5	Dust pan/brush	524	Clear	SILT; fine to very fine grain, brown, minor organics, loose, dry, no odour or staining.	
COB_014	Ward Oval - oval	7/04/2020	8:15	(-31.5034584, 145.8336189)	7	Dust pan/brush	358	Clear	Gravely SILT; fine to very fine grain, brown, 5 mm b-axis gravels, minor organics, medium dense to loose, moist, no odour or staining.	
COB_008	Kubbi Child Care - beside sand pit	7/04/2020	9:00	(-31.4982559, 145.8338972)	1	Dust pan/brush	715	Clear	FILL: Silty SAND; med to fine grain, light brown, minor gravels 5mm b-axis, loose, dry to moist, no odour or staining.	
COB_023	Newey Reserve - picnic area	7/04/2020	9:40	(-31.5097708, 145.8318366)	4	Dust pan/brush	562	Clear	Gravely SILT; fine to very fine grain, brown, 10 mm b-axis gravels, loose, dry, no odour or staining.	
COB_005	Cobar Public School - mud kitchen	7/04/2020	10:20	(-31.5022426, 145.8365023)	2	Dust pan/brush	707	Clear	Gravely SILT; fine to very fine grain, brown, 5 mm b-axis gravels, minor organics, loose, dry to moist, no odour or staining.	PVC basin pipe inside mud kitchen
COB_021	Railway Station - beside main building	7/04/2020	10:50	(-31.4921356, 145.8391758)	1	Dust pan/brush	519	Clear	Sandy SILT; fine grain, red-brown, medium to fine grain sand, loose, dry to moist, no odour or staining.	
COB_024	Old Reservoir	7/04/2020	11:20	(-31.4806783, 145.8587592)	2	Dust pan/brush	556	Clear	Gravely SILT; fine to very fine grain, brown, 20 mm b-axis gravels, minor organics, medium dense to loose, dry to moist, no odour or staining.	
COB_022	Dalton Park Race Course - Pony Club playground	7/04/2020	11:45	(-31.4855035, 145.8337607)	2.5	Dust pan/brush	476	Clear	Gravely SILT; fine to very fine grain, red-brown, 5 mm b-axis gravels, minor organics, loose, dry, no odour or staining.	
COB_012	Drummond Park - nature strip beside playground	7/04/2020	12:55	(-31.5003159, 145.8389417)	0.5	Dust pan/brush	780	Clear	Gravely SILT; fine to very fine grain, red-brown, 5 mm b-axis gravels, minor organics, loose, dry, no odour or staining.	
COB_013	Miners Heritage Park - beside pear tree	7/04/2020	13:15	(-31.4975403, 145.8431401)	1	Dust pan/brush	663	Clear	Gravely SILT; fine to very fine grain, brown, 5 mm b-axis gravels, minor organics, loose, dry, no odour or staining.	
COB_011	Heritage Museum - car park	7/04/2020	13:30	(-31.4975403, 145.8431401)	0.5	Dust pan/brush	617	Clear	Sandy SILT; fine grain, red-brown, medium to fine grain sand, loose, dry, no odour or staining.	BBQ benchtop
COB_020	Memorial Services Club - former bowling green	7/04/2020	13:55	(-31.4988751, 145.8403502)	1.5	Dust pan/brush	714	Clear	SILT; fine to very fine grain, brown, minor organics, medium dense, dry, no odour or staining.	
COB_006	Cobar High School - picnic table in top quad	7/04/2020	14:20	(-31.5021085, 145.8270435)	1	Dust pan/brush	434	Clear	Gravely SILT; fine to very fine grain, red-brown, 5 mm b-axis gravels, minor organics, medium dense to loose, moist, no odour or staining.	
COB_009	Cobar District Hospital - near old hospital building	7/04/2020	15:00	(-31.5079005, 145.8256843)	0.5	Dust pan/brush	669	Clear	Gravely SILT; fine to very fine grain, red-brown, 10 mm b-axis gravels, loose, dry, no odour or staining.	
COB_030	Ngali Preschool	7/04/2020	15:25	(-31.5001109, 145.8402262)	0.5	Dust pan/brush	537	Clear	FILL: SAND: coarse to fine grain (poorly sorted), light brown, medium dense to loose, moist, no odour or staining.	Cubby house benchtop
COB_019	Tom Knight Oval - near goal posts	7/04/2020	15:55	(-31.4928795, 145.8262378)	0.5	Dust pan/brush	341	Clear	SILT; fine to very fine grain, dark brown, minor organics, medium dense, moist, no odour or staining.	
COB_026	Cobar Preschool Centre - beside playground	7/04/2020	16:20	(-31.5025350, 145.8328253)	3	Dust pan/brush	445	Clear	Gravely SILT; fine to very fine grain, brown, 15 mm b-axis gravels, minor organics, medium dense to loose, dry, no odour or staining.	
PGM_001	Peak - TSF - north side	8/04/2020	7:40	(-31.5580104, 145.8676877)	1	Dust pan/brush	344	Partly cloudy	SILT; very fine grain, grey to brown, dense to medium dense, moist, no odour or staining.	
PGM_002	Peak - TSF - south side	8/04/2020	8:20	(-31.5677046, 145.8677738)	0.5	Direct hand grab	934	Partly cloudy	SILT; very fine grain, grey to brown, dense to medium dense, saturated, no odour or staining.	
PGM_013	Peak - Picnic area beside administration buildings	8/04/2020	8:35	(-31.5649342, 145.8777818)	3	Dust pan/brush	532	Partly cloudy	Sandy SILT; fine to very fine grain, fine sand, minor organics, brown, loose, dry, no odour or staining.	BBQ
PGM_014	New Occidental tailings heap	8/04/2020	9:15	(-31.5374857, 145.8593168)	2	Dust pan/brush	364	Partly cloudy	Gravely SILT; fine to very fine grain, dark brown, 10 mm b-axis gravels, medium dense to loose, dry to moist, no odour or staining.	
PGM_003	Young Australia Reservoir - northwestern corner	8/04/2020	9:45	(-31.5272403, 145.8620849)	1	Dust pan/brush	679	Overscast	Gravely sandy SILT; fine to very fine grain, brown, 25 mm b-axis gravels, fine sand, loose, dry, no odour or staining.	
PGM_015	New Cobar - Magazine - southeastern corner	8/04/2020	10:15	(-31.5244641, 145.8622257)	1.5	Dust pan/brush	658	Overscast	Gravely SILT; fine to very fine grain, red-brown, 15 mm b-axis gravels, medium dense, dry, no odour or staining.	
PGM_004	New Cobar sediment basin - southwestern corner	8/04/2020	10:40	(-31.5224941, 145.8561293)	1	Dust pan/brush	889	Overscast	Gravely SILT; fine to very fine grain, red-brown, 15 mm b-axis gravels, medium dense, moist, no odour or staining.	
PGM_005	New Cobar - ROM pad	8/04/2020	11:20	(-31.5186654, 145.8536852)	2	Dust pan/brush	634	Overscast	FILL: Weathered SHALE; grey, with pyrite inclusions, minor quartz, sub angular, dry to moist, no odour or staining.	
PGM_009	New Cobar - waste rock emplacement area	8/04/2020	12:00	(-31.5161331, 145.8513081)	1	Dust pan/brush	660	Partly cloudy	Gravely SILT; fine to very fine grain, red-brown, 5 mm b-axis gravels, medium dense to loose, moist to dry, no odour or staining.	
PGM_010	New Cobar - topsoil stockpile	8/04/2020	12:40	(-31.5123999, 145.8503757)	1.5	Dust pan/brush	676	Partly cloudy	Gravely SILT; fine to very fine grain, red-brown, 20 mm b-axis gravels, medium dense to loose, dry, no odour or staining.	
COB_018	Rugby Club, Lewis St - beside spectator steats near clubhouse	8/04/2020	14:10	(-31.5067994, 145.8415955)	2	Dust pan/brush	341	Partly cloudy	SILT; fine to very fine grain, brown, minor organics, medium dense to loose, dry, no odour or staining.	Deflated jumping castle
PGM_011	Proposed exhaust vent, near Kidman Way residence	8/04/2020	14:50	(-31.5051309, 145.8456758)	1	Dust pan/brush	684	Partly cloudy	Gravely SILT; fine to very fine grain, brown, minor organics, medium dense to loose, dry, no odour or staining.	
PGM_007	Fort Bourke Lookout	8/04/2020	15:20	(-31.5169451, 145.8562822)	0.5	Dust pan/brush	461	Partly cloudy	FILL: Silty GRAVEL; dark grey-blue, 10 mm b axis, very fine grain red-brown silt, medium dense to loose, dry, no odour or staining.	Information display frames
PGM_008	Water Treatment Plant - near main gate	8/04/2020	15:45	(-31.5125991, 145.8609922)	0.5	Dust pan/brush	1406	Partly cloudy	SILT; fine to very fine grain, red-brown, minor organics, very loose, dry, no odour or staining.	
COB_007	St Johns Primary School - beside playground	8/04/2020	16:15	(-31.4995800, 145.8348205)	1	Dust pan/brush	656	Partly cloudy	FILL: Sandy GRAVEL; 5 mm b-axis, light brown, coarse to medium grain sand, minor organics, loose, dry, no odour or staining.	Play equipment
COB_012a	Drummond Park - inside playground area beside swing set	9/04/2020	7:10	(-31.5002158, 145.8386705)	0.5	Dust pan/brush	504	Overscast	FILL: Gravely silty SAND; coarse to medium grain, brown, <5 mm b-axis gravels, minor organics, medium dense to loose, dry, no odour or staining.	Play equipment
PGM_012	Exhaust air rise - beside fence near Kidman Way	9/04/2020	7:40	(-31.5028712, 145.8442649)	0.5	Dust pan/brush	647	Overscast	Silty GRAVEL; 20 mm b-axis, brown-red to grey, very fine grain brown silt, medium dense to dense, dry, no odour or staining.	
PGM_016	Background sample - 11 km south of Hospital along Lerida Rd	9/04/2020	8:25	(-31.6032682, 145.7979368)	0.5	Dust pan/brush	724	Overscast	Gravely SILT; very fine grain, red-brown, 5-10 mm b-axis grey gravels, trace organics, medium dense to loose, dry, no odour or staining.	
PGM_006	Background sample - 8 km south of Hospital along Lerida Rd	9/04/2020	8:45	(-31.5763749, 145.8014823)	0.5	Dust pan/brush	466	Overscast	Gravely SILT; very fine grain, red-brown, 5-10 mm b-axis grey gravels, trace organics, medium dense to loose, dry, no odour or staining.	
COB_015	Caravan Park	9/04/2020	9:10	(-31.4961115, 145.8295649)	1	Dust pan/brush	772	Overscast	Gravely SILT; very fine grain, red-brown, <5 mm b-axis gravel, minor organics, medium dense to loose, dry, no odour or staining.	
COB_016	Ti Hospitality Group - between carpark and accommodation units	9/04/2020	9:30	(-31.5034143, 145.8609513)	1	Dust pan/brush	509	Overscast	SILT; very fine grain, brown, minor organics, medium dense to loose, dry to moist, no odour or staining.	
COB_002	7 Fourteenth St - backyard beside clothes line	9/04/2020	9:50	(-31.4954577, 145.8440265)	0.5	Dust pan/brush	1228	Overscast	SILT; very fine grain, brown, minor organics, loose, dry to moist, no odour or staining.	
COB_027	1 Cornish St - across road from residence in vacant lot	9/04/2020	10:15	(-31.4973316, 145.8556435)	0.5	Dust pan/brush	849	Overscast	Gravely SILT; very fine grain, red to brown, 10 mm b axis gravel, dense to loose, dry, no odour or staining.	
COB_025	Western Auto & Engineering, 7-9 Dunstan St - within rear yard be	9/04/2020	10:30	(-31.4986329, 145.8516846)	0.5	Dust pan/brush	709	Overscast	FILL: Gravely SILT; very fine grain, brown, <5 mm b axis gravel, minor organics, medium dense to loose, dry, no odour or staining.	
COB_010	Golf Course - next to fairway near creek	9/04/2020	11:15	(-31.5064570, 145.8366159)	0.5	Dust pan/brush	354	Overscast	SILT; very fine grain, brown, with organics (30%), loose, dry to moist, no odour or staining.	
COB_028	Cobar Uniting Church COOSH - beside sand pit	9/04/2020	11:45	(-31.5003733, 145.8351977)	0.5	Dust pan/brush	482	Overscast	FILL: SAND; very coarse to medium grain, light brown, medium dense to loose, dry to moist, no odour or staining.	Picnic table
PGM_017	Background sample - approx 7 km south of PGM along Kidman W	9/04/2020	12:15	(-31.6127478, 145.8971212)	1	Dust pan/brush	700	Overscast	Gravely SILT; very fine grain, red-brown, 20 mm b-axis gravel, trace organics, dense to loose, dry, no odour or staining.	
COB_029	Residence, 25 Green Street - nature strip in front of front garden	9/04/2020	13:20	(-31.4936983, 145.8319895)	1	Dust pan/brush	386	Overscast	SILT: fine to very fine grain, brown, with organics (40%), loose, dry to moist, no odour or staining.	
COB_004	Residence, 6 Harcourt Street - next to eastern boundary (no. 2/4)	9/04/2020	13:40	(-31.5006372, 145.8397803)	0.5	Dust pan/brush	650	Overscast	SILT: fine to very fine grain, brown, minor organics, loose, dry, no odour or staining.	
COB_001	Residence, 82 Old Bourke Rd - beside fence in driveway	9/04/2020	14:40	(-31.4984686, 145.8454454)	0.5	Dust pan/brush	588	Light shower	SILT: fine to very fine grain, brown, minor <5 mm b-axis gravel, minor organics, loose, dry to moist, no odour or staining.	
COB_003	Cobar Lions Club Children's Playground (next to Bowling and Golf)	9/04/2020	15:20	(-31.5009202, 145.8311097)	0.5					

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Appendix B

## Photographic log

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**Photograph 1 COB\_001: Residence, 82 Old Bourke Rd - beside fence in driveway**



**Photograph 2 COB\_002: Residence, 7 Fourteenth St - backyard beside clothesline**



**Photograph 3** COB\_003: Cobar Lions Club Children's Playground (next to Bowling and Golf Club) - beside slide



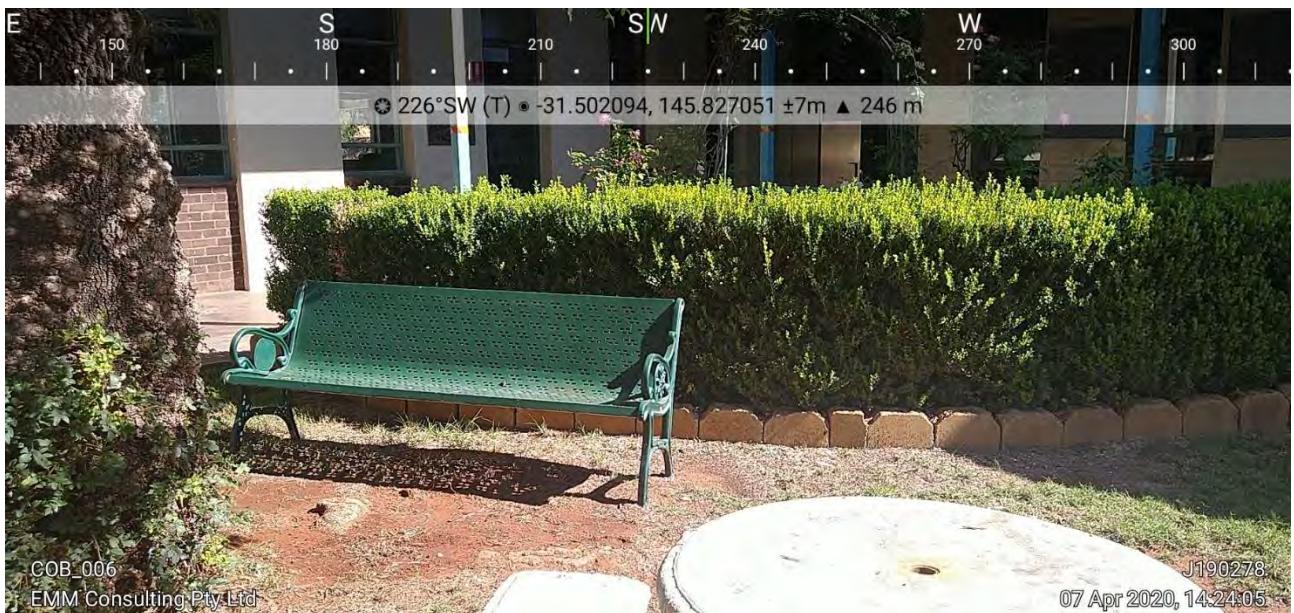
**Photograph 4** COB\_003: Swab taken from inside park public toilet basin



**Photograph 5** COB\_004: Residence, 6 Harcourt Street - next to eastern boundary (no. 2/4) on nature strip



**Photograph 6** COB\_005: Cobar Public School - mud kitchen. Swab taken from pipe under sink



Photograph 7 COB\_006: Cobar High School - picnic table in top quad



Photograph 8 COB\_007: St Johns Primary School - beside playground



Photograph 9      COB\_007: Swab taken from play equipment



Photograph 10      COB\_008: Kubbi Child Care - beside sand pit. Swab taken from inside cubby house





**Photograph 13 COB\_011: Heritage Museum - car park**



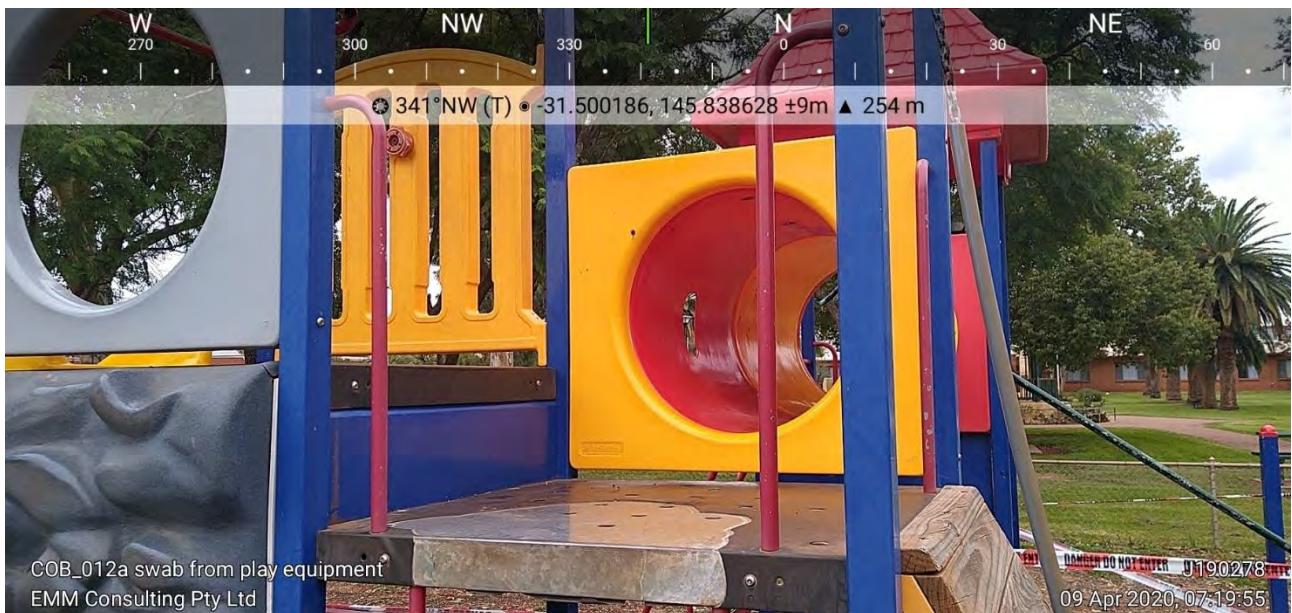
**Photograph 14 COB\_011: Swab from barbecue next to car park**



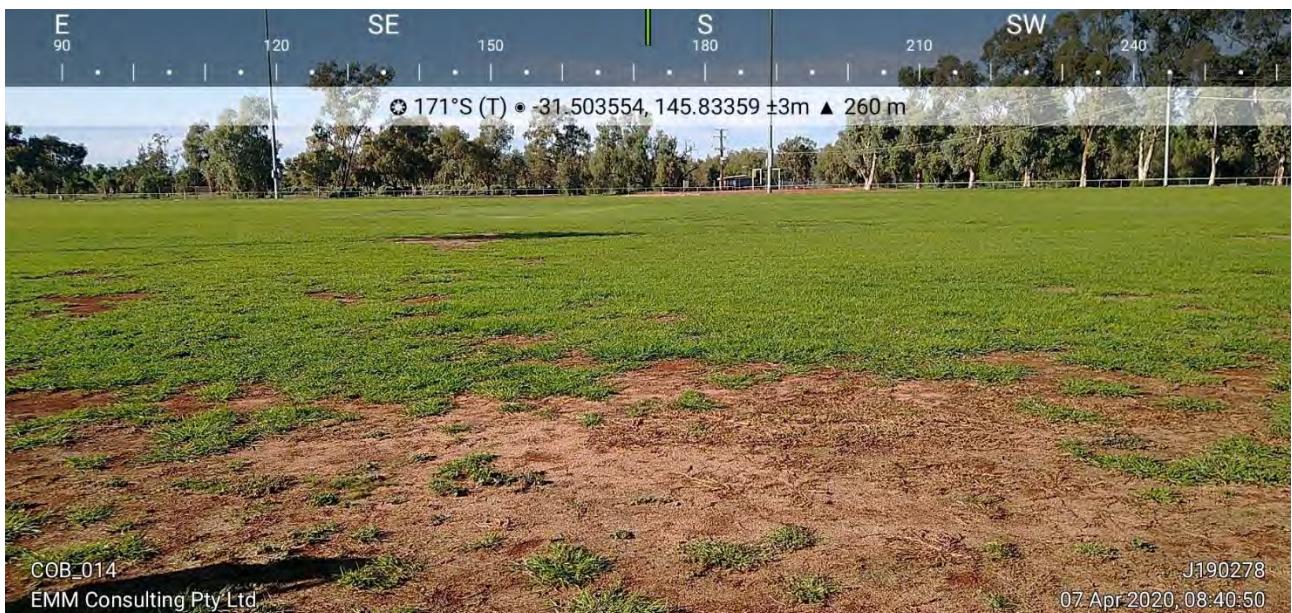
Photograph 15 COB\_012: Drummond Park - nature strip beside playground



Photograph 16 COB\_012a: Drummond Park - inside playground area beside swing set



Photograph 17 COB\_012a: Swab from play equipment



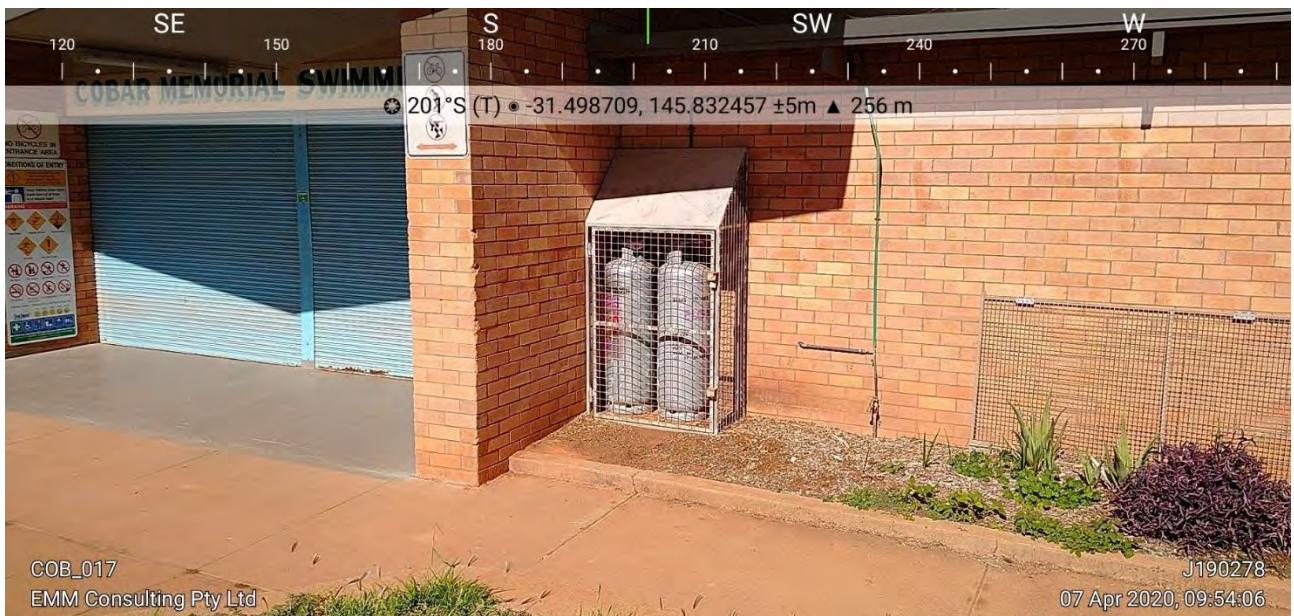
Photograph 18 COB\_014: Ward Oval - oval



**Photograph 19 COB\_015: Caravan Park – powered site**



**Photograph 20 COB\_016: TI Hospitality Group - between carpark and accommodation units**



**Photograph 21 COB\_017: Swimming pool - garden bed beside main entrance**



**Photograph 22 Rugby Club, Lewis St - beside spectator steats near clubhouse**



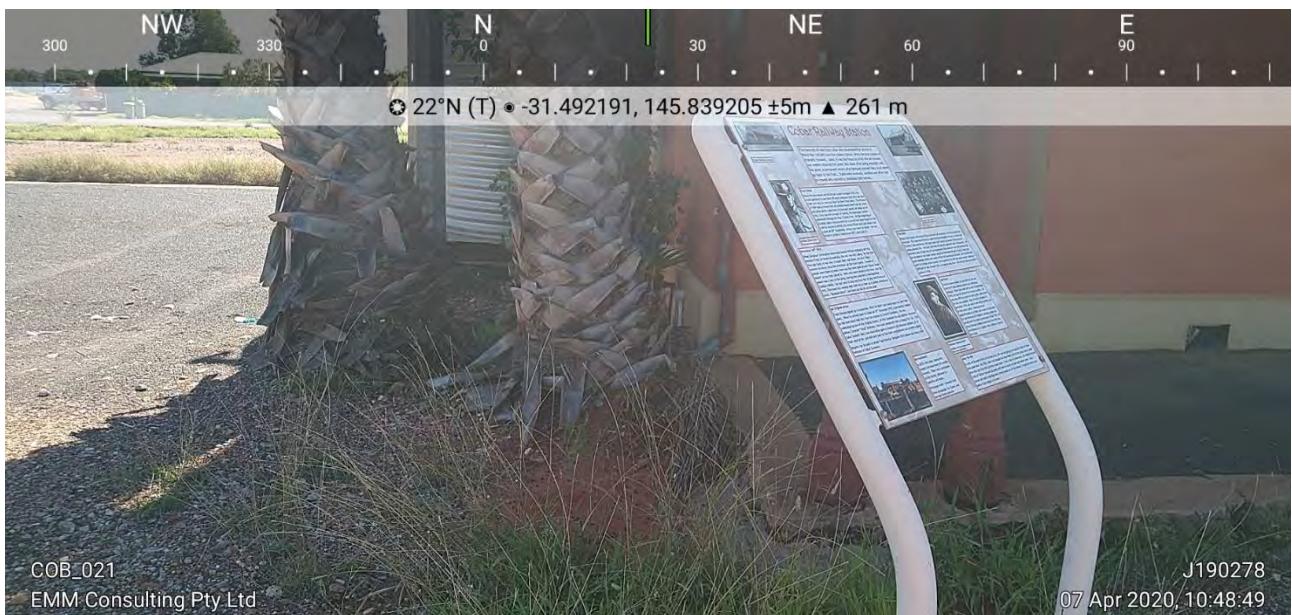
**Photograph 23 COB\_018: Swab taken from deflated jumping castle outside clubhouse.**



**Photograph 24 COB\_019: Tom Knight Oval - near goal posts**



Photograph 25 COB\_020: Memorial Services Club - former bowling green



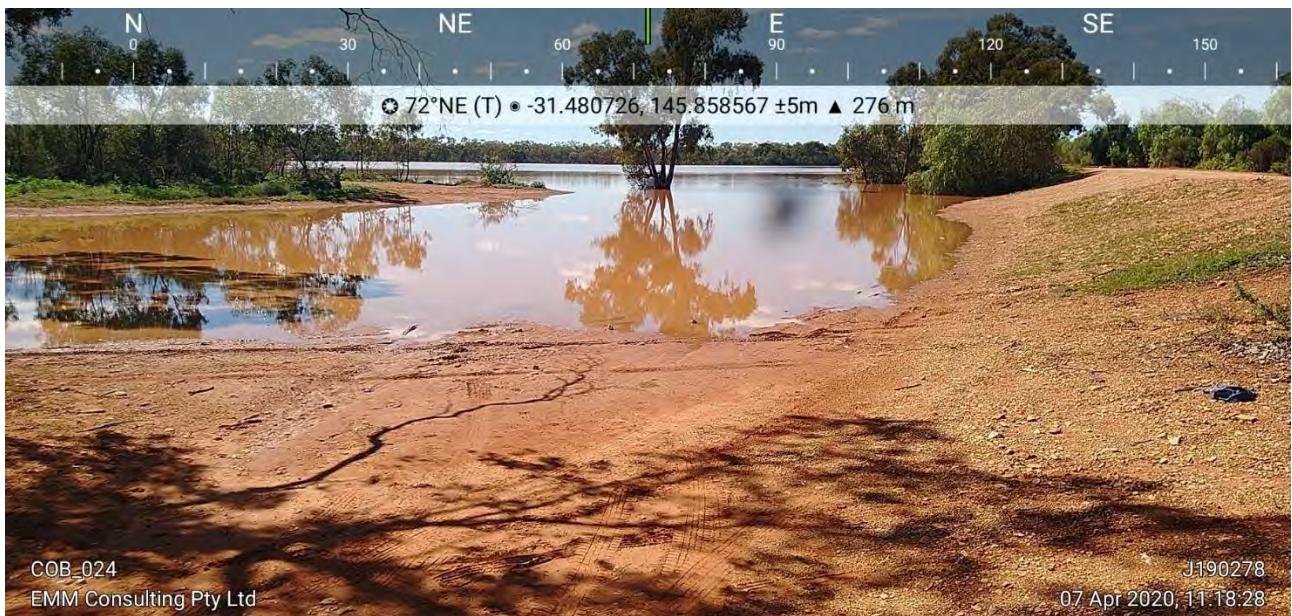
Photograph 26 COB\_021: Railway Station - beside main building



**Photograph 27 COB\_022: Dalton Park Race Course - Pony Club playground**



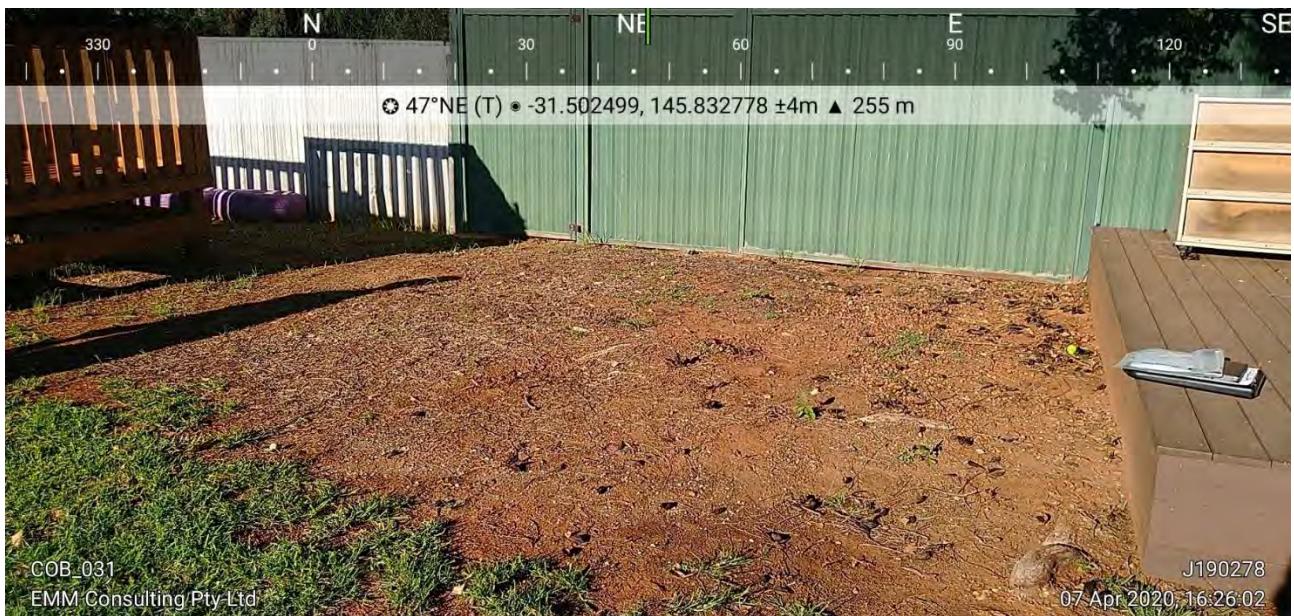
**Photograph 28 COB\_023: Newey Reserve - picnic area**



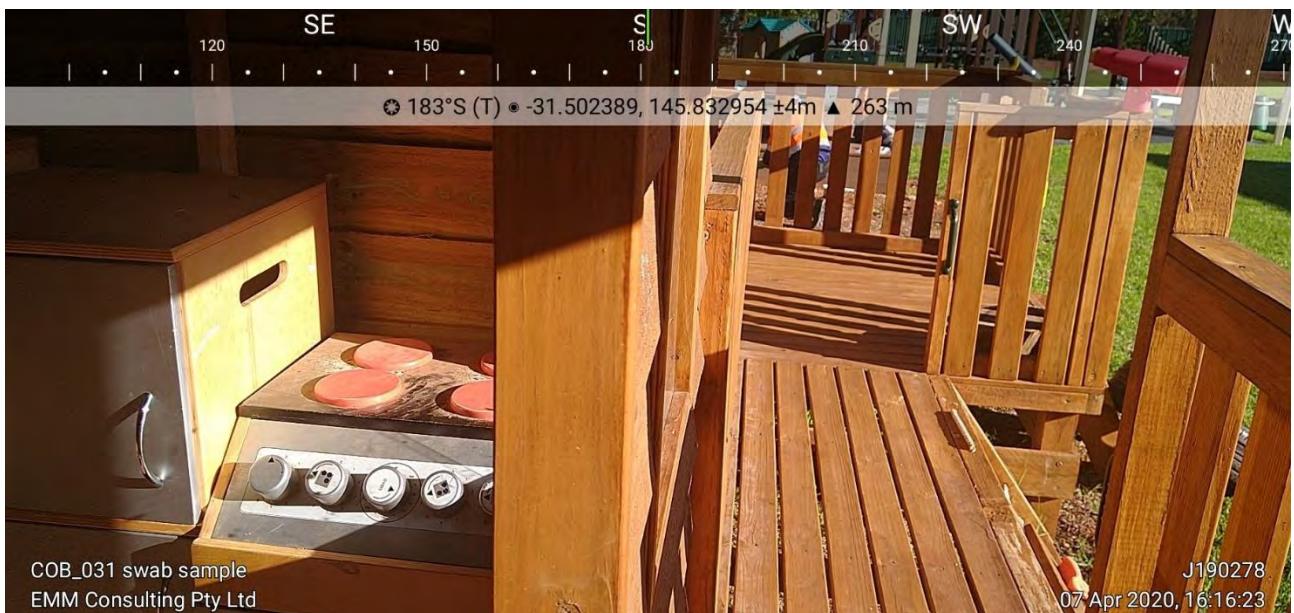
Photograph 29 COB\_024: Old Reservoir – southwestern corner



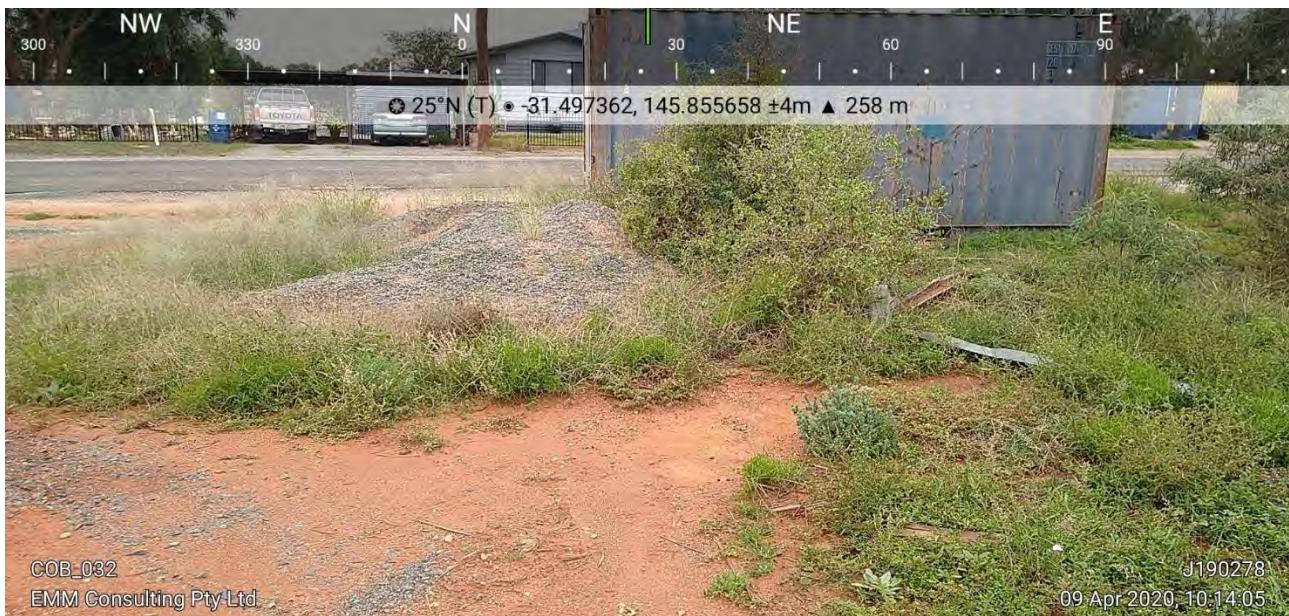
Photograph 30 COB\_025: Western Auto & Engineering, 7-9 Dunstan St - within rear yard beside fence



Photograph 31 COB\_026: Cobar Preschool Centre - beside playground



Photograph 32 COB\_026: Swab taken from inside cubby house



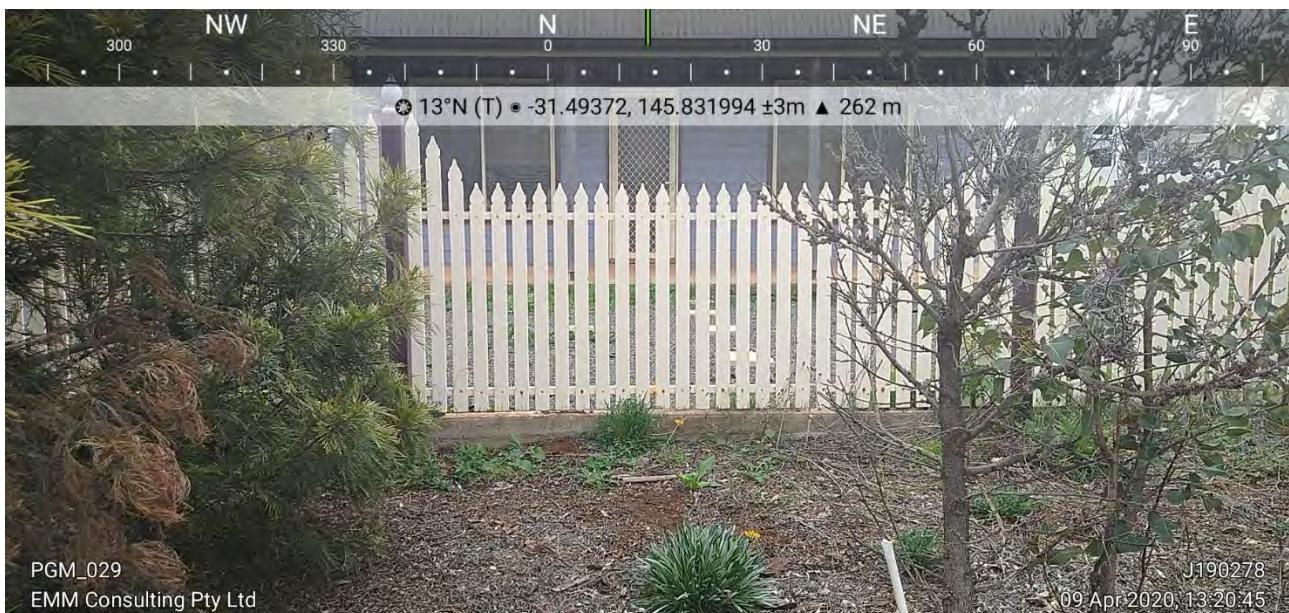
**Photograph 33** COB\_027: Residence, 1 Cornish St - across the road from the residence in a vacant lot



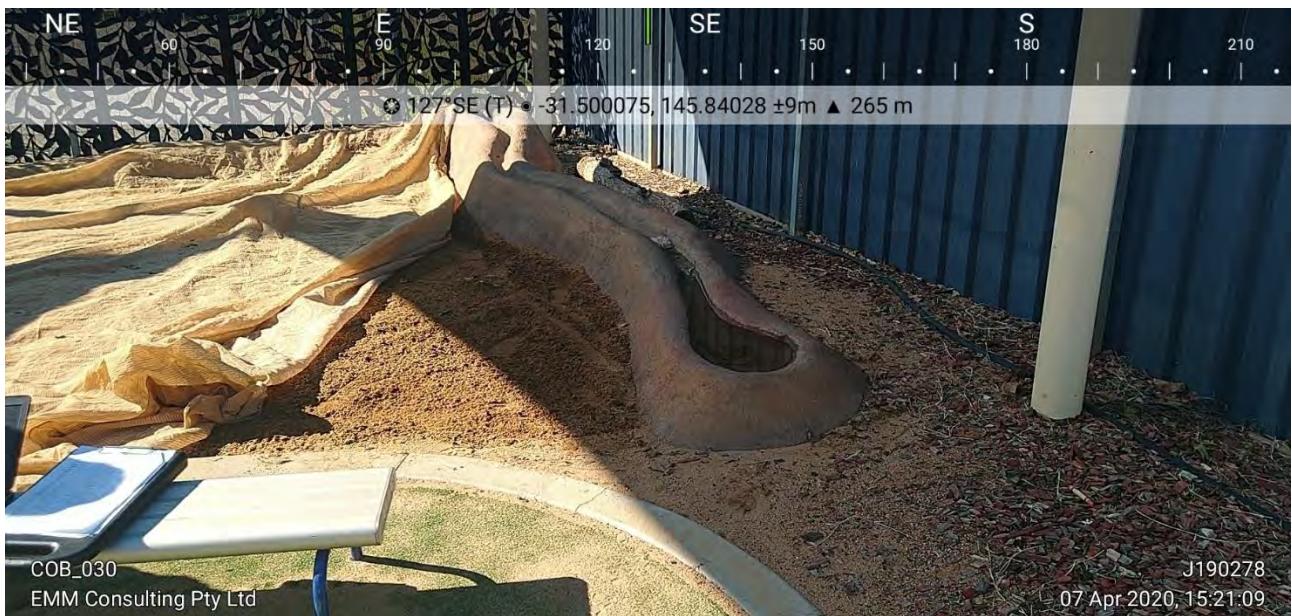
**Photograph 34** COB\_028: Cobar Uniting Church COOSH - beside sand pit



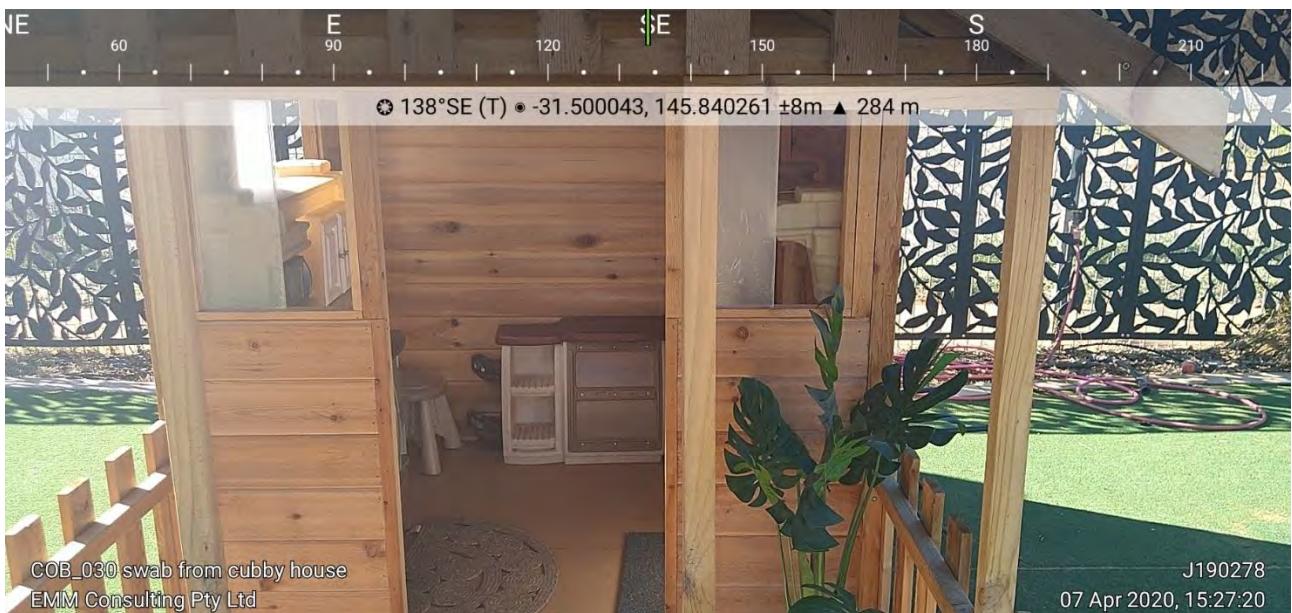
Photograph 35 COB\_028: Swab taken from picnic table



Photograph 36 COB\_029: Residence, 25 Green Street - nature strip in front of front garden fence



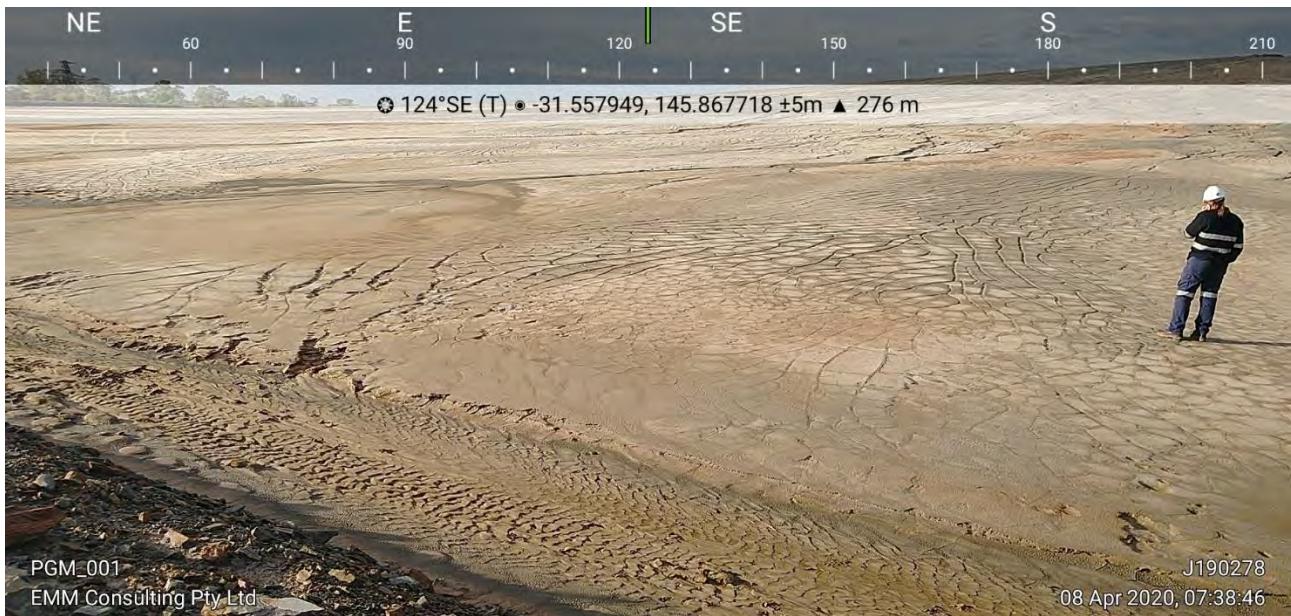
Photograph 37 COB\_030: Ngali Preschool – sand pit



Photograph 38 COB\_030: Swab taken from cubby house



**Photograph 39** QC400: Field blank swab taken from motel shower screen door



**Photograph 40** PGM\_001: Peak Gold Mine - TSF - north side



**Photograph 41** PGM\_002: Peak Gold Mine – TSF – south side



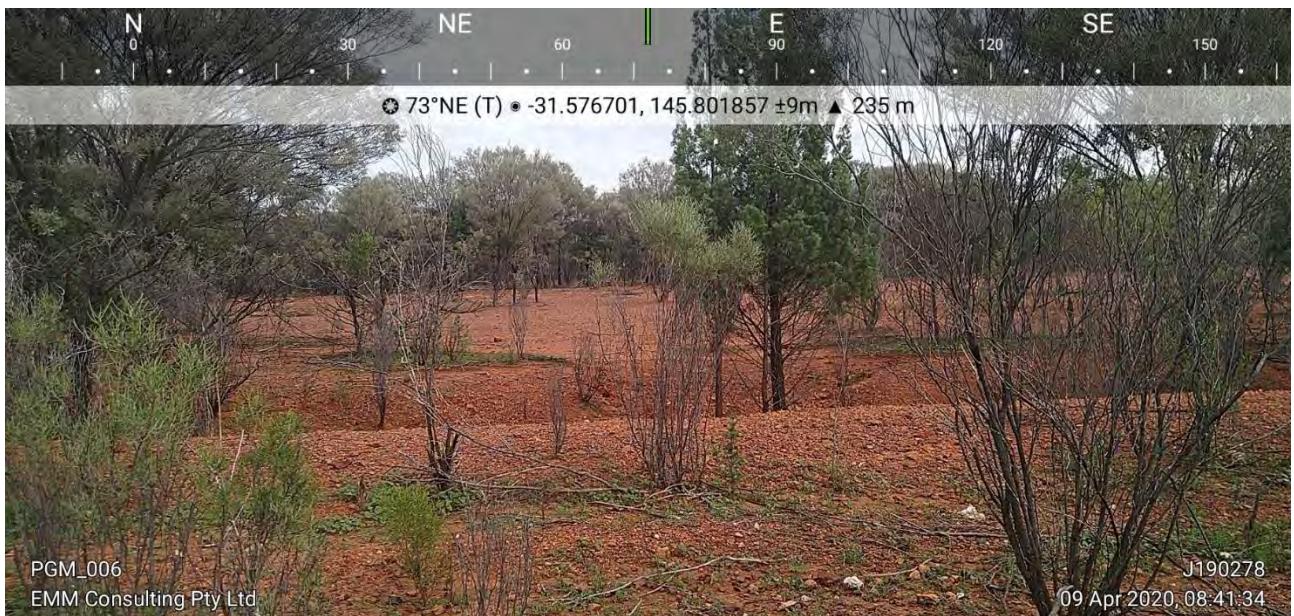
**Photograph 42** PGM\_003: Young Australia 3 - northwestern corner



**Photograph 43**      **PGM\_004: New Cobar sediment basin - southwestern corner**



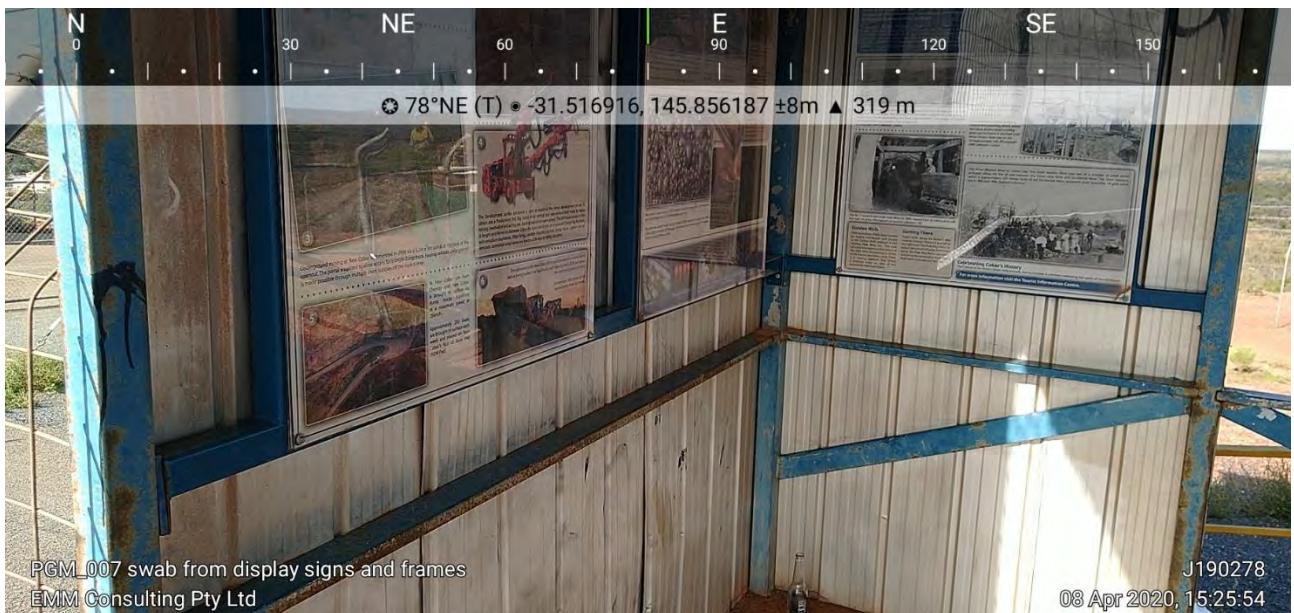
**Photograph 44**      **PGM\_005: New Cobar Mine - ROM pad**



**Photograph 45** PGM\_006: Background sample - 8 km south of Hospital along Lerida Rd



**Photograph 46** PGM\_007: Fort Bourke Lookout



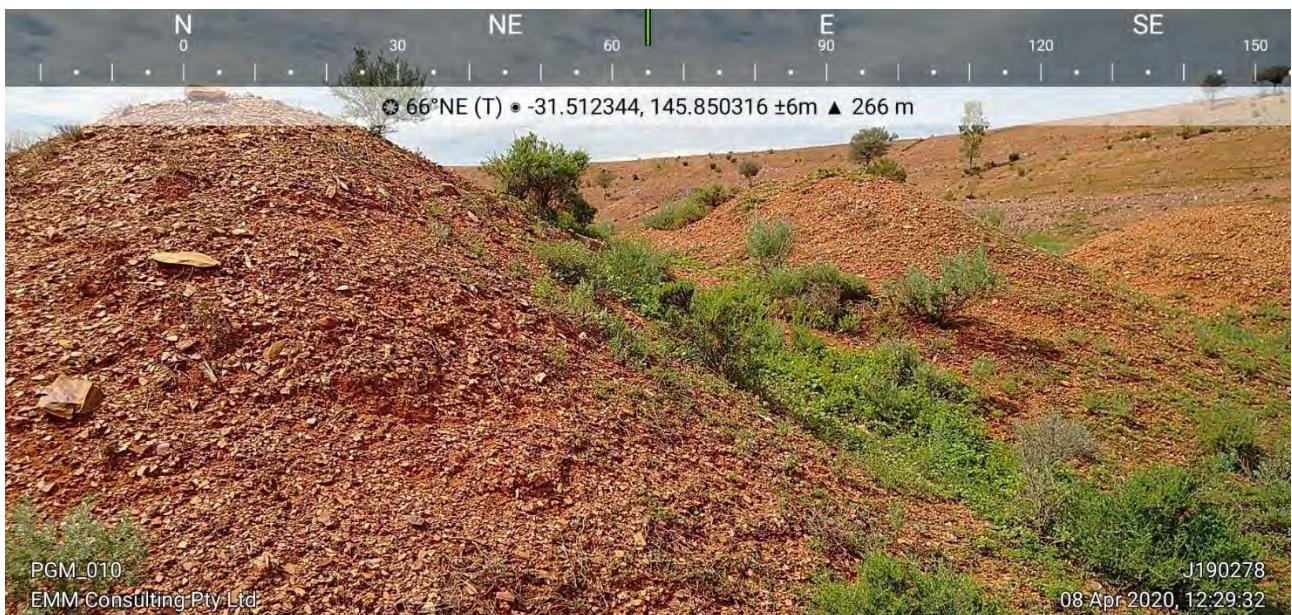
**Photograph 47** PGM\_007: Swab taken from display signs and frames



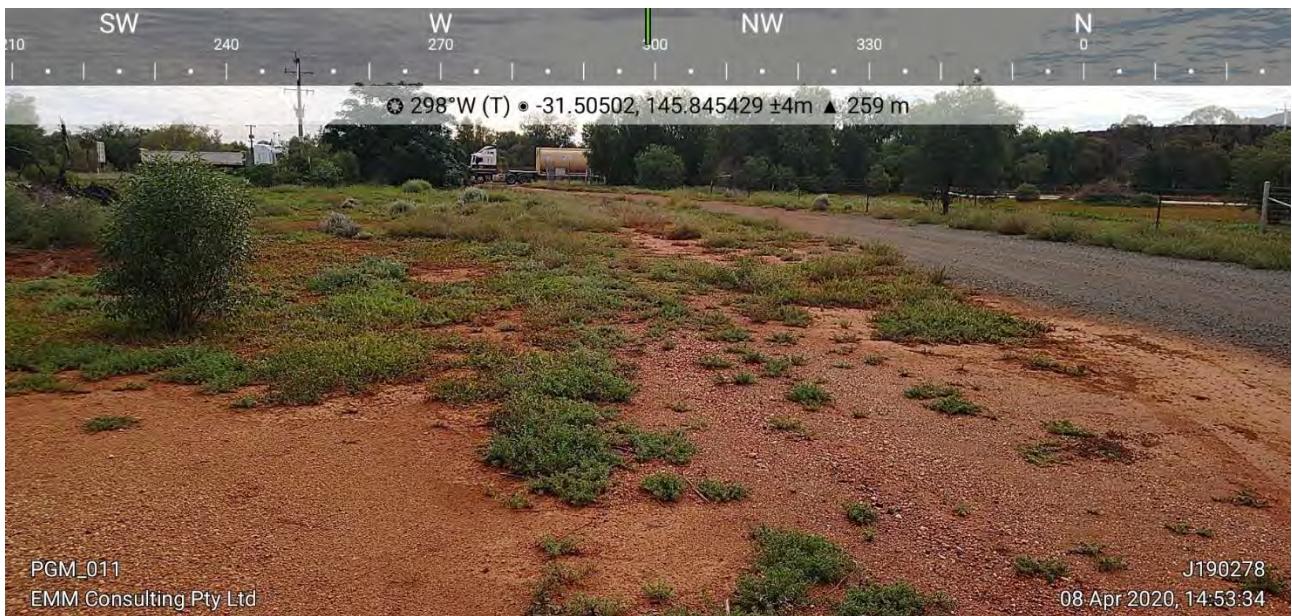
**Photograph 48** PGM\_008: Water Treatment Plant - near main gate



Photograph 49 PGM\_009: New Cobar - waste rock emplacement area



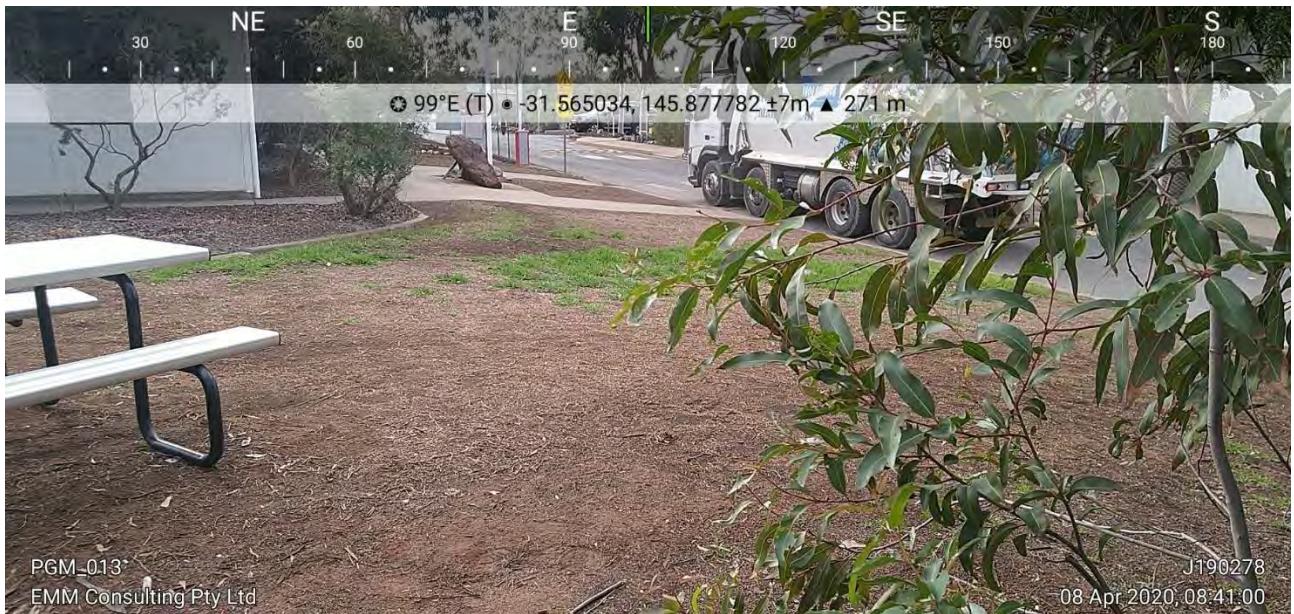
Photograph 50 PGM\_010: New Cobar Mine - soil stockpile



**Photograph 51** PGM\_011: Proposed exhaust vent, near Kidman Way residence



**Photograph 52** PGM\_012: Exhaust air rise - beside fence near Kidman Way



**Photograph 53** PGM\_013: Peak Complex - picnic area beside administration buildings



**Photograph 54** PGM\_013: Swab taken from barbecue



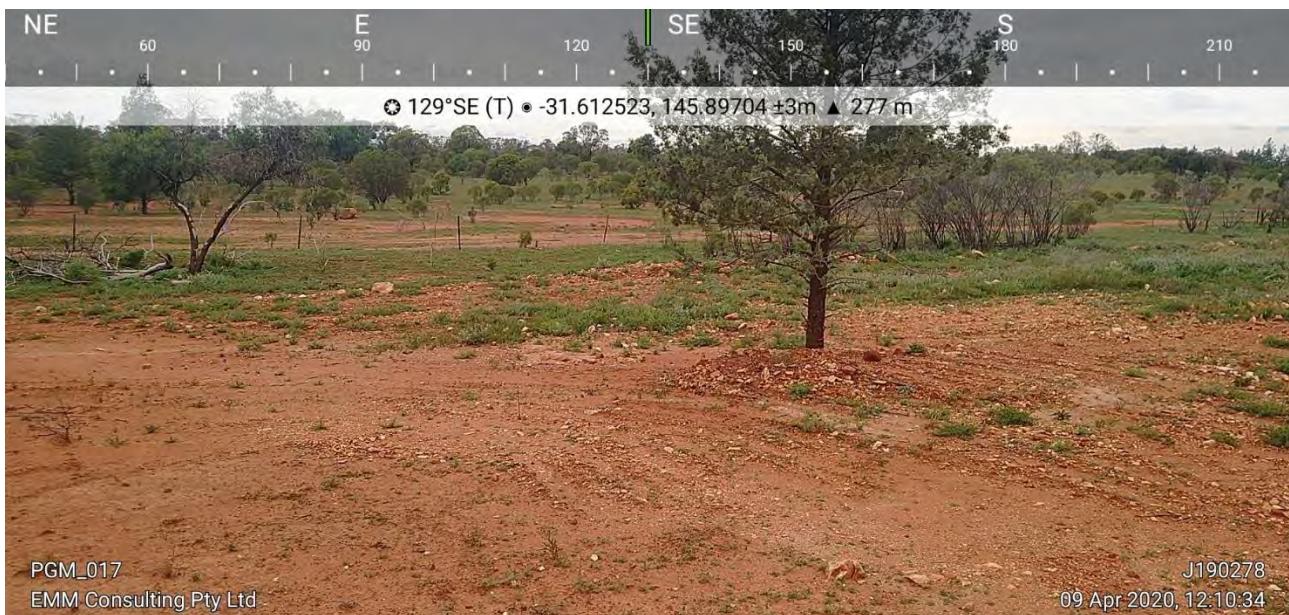
**Photograph 55**      **PGM\_014: New Occidental tailings heap**



**Photograph 56**      **PGM\_015: New Cobar - Magazine - southeastern corner**



**Photograph 57** PGM\_016: Background sample - 11 km south of Hospital along Lerida Rd



**Photograph 58** Background sample – approx. 7 km south of PGM along Kidman Way