

GEELONG LEATHER PTY LTD - CULCAIRN

SOIL ANALYSIS 2019/2020

EPA ID LOCATION: 1, 2, 3, 4

EPA LICENSE NUMBER: 3465



Leather Naturally

\*Not Tested (NT) No Sample (NS)

ANALYSIS	IRRIGATION SECTOR 1				IRRIGATION SECTOR 2				IRRIGATION SECTOR 3				IRRIGATION SECTOR 4			
	0-10 cm	10-30 cm	30-60 cm	AVE	0-10 cm	10-30 cm	30-60 cm	AVE	0-10 cm	10-30 cm	30-60 cm	AVE	0-10 cm	10-30 cm	30-60 cm	AVE
pH - pH units	6.89	6.62	7.01	6.84	6.9	7.82	5.67	6.80	4.94	4.96	5.51	5.14	5.58	4.9	5.85	5.44
Electrical Conductivity $\mu$ S/cm	520	380	500	466.67	580	730	1240	850.00	340	300	310	316.67	470	950	710	710.00
TKN-N - mg/kg	1930	640	250	940.00	1090	750	360	733.33	1040	520	480	680.00	1760	540	330	876.67
Available Phosphorus (Colwell P) - mg/kg	16	3	3	7.33	7.9	12	3	7.63	3	3	3	3.00	6.8	3	3	4.27
Emerson Aggregate Class - Class	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Permability - mm/hr	3.75	2.5	2.5	2.92	40	3.75	2.5	15.42	40	3.75	2.5	15.42	40	2.5	2.5	15.00
Exchangeable Calcium - mg/kg	1100	1020	1046	1055.33	1218	2240	1390	1616.00	372	652	1268	764.00	754	858	1548	1053.33
Exchangeable Magnesium - mg/kg	105	228	644	325.67	106	223	250	193.00	80.9	222	516	272.97	84.2	102	508	231.40
Exchangeable Potassium - mg/kg	113	88.9	158	119.97	80.7	98.7	160	113.13	84.6	136	216	145.53	107	99.8	245	150.60
Exchangeable Sodium - mg/kg	243	267	529	346.33	374	366	666	468.67	256	287	477	340.00	248	261	455	321.33
Available Nitrate - mg/kg	78.3	37.3	21.2	45.60	51.2	28.8	38.1	39.37	46.6	31.4	26.7	34.90	24.4	32.6	18	25.00
Total Nitrogen - %	0.201	0.068	0.05	0.11	0.114	0.05	0.05	0.07	0.109	0.055	0.051	0.07	0.178	0.057	0.05	0.10
Cadmium - mg/kg	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00
Organic Carbon - %	1.13	0.44	0.22	0.60	1.14	1.3	0.34	0.93	1.06	0.33	0.28	0.56	1.12	0.34	0.23	0.56
Total Phosphorus - mg/kg	284	165	132	193.67	266	369	204	279.67	250	130	209	196.33	247	152	137	178.67
Chromium - mg/kg	70	22	21	37.67	97	90	31	72.67	21	20	24	21.67	42	20	24	28.67
Chromium VI- mg/kg	3.8	0.5	0.5	1.60	3.8	0.5	0.5	1.60	4.1	0.5	0.5	1.70	3.7	0.5	0.5	1.57
Total Sulfur (LECO) - %	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Available Phosphorus (Bray P) - mg/kg	31.3	4.7	2.2	12.73	28.6	5.3	1.9	11.93	20.2	2.4	1.7	8.10	29.1	3.3	2	11.47
Exchangeable Aluminium - mg/kg	2.7	2.7	2.7	2.70	2.7	2.7	2.7	2.70	2.7	2.7	2.7	2.70	2.7	2.7	2.7	2.70
SAR - SAR Units	1.7	2.3	4.2	2.73	2.6	1.8	2.8	2.40	3.3	4.3	3.1	3.57	1.5	1.1	2.4	1.67
Chloride - mg/kg	73.7	76.9	80	76.87	78.6	93.8	177	116.47	68.6	62.6	76	69.07	67.1	69.9	98.3	78.43
CEC - cmol/kg	6.79	7.43	11.7	8.64	7.4	13.6	9.84	10.28	2.96	5.82	12.5	7.09	5.09	5.53	13	7.87
ESP - %of ECEC	2	3.1	6.6	3.90	3.2	2.25.67	4.3	3.75	6.4	6.1	10.6	7.70	7	2.2	4	4.40

GEELONG LEATHER PTY LTD - CULCAIRN

SOIL ANALYSIS 2019/2020

EPA ID LOCATION: 5, 6, 7, 8

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Leather Naturally

\*Not Tested (NT) No Sample (NS)

ANALYSIS	IRRIGATION SECTOR 5				IRRIGATION SECTOR 6				IRRIGATION SECTOR 7				IRRIGATION SECTOR 8			
	0-10 cm	10-30 cm	30-60 cm	AVE	0-10 cm	10-30 cm	30-60 cm	AVE	0-10 cm	10-30 cm	30-60 cm	AVE	0-10 cm	10-30 cm	30-60 cm	AVE
pH - pH units	4.97	5.08	6.03	5.36	5.2	5.49	5.74	5.48	5.24	5.8	7.11	6.05	5.99	5.87	5.93	5.93
Electrical Conductivity $\mu\text{S}/\text{cm}$	470	430	450	450.00	390	400	490	426.67	500	250	120	290.00	560	450	500	503.33
TKN-N - mg/kg	890	720	290	633.33	1140	450	480	690.00	640	480	320	480.00	970	440	420	610.00
Available Phosphorus (Colwell P) - mg/kg	18	3	3	8.00	7.7	3	3	4.57	3	3	3	3.00	3	3	3	3.00
Emerson Aggregate Class - Class	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Permeability - mm/hr	2.5	2.5	2.5	2.50	3.75	3.75	2.5	3.33	40	3.75	2.5	15.42	3.75	2.5	2.5	2.92
Exchangeable Calcium - mg/kg	488	1178	1594	1086.67	1614	1152	1240	1335.33	456	694	1004	718.00	666	1096	1194	985.33
Exchangeable Magnesium - mg/kg	81.1	311	569	320.37	1118	353	539	670.00	104	405	404	304.33	115	309	425	283.00
Exchangeable Potassium - mg/kg	57.7	185	168	136.90	175	145	166	162.00	77.6	106	165	116.20	102	209	247	186.00
Exchangeable Sodium - mg/kg	341	543	369	417.67	585	516	591	564.00	238	267	240	248.33	431	442	619	497.33
Available Nitrate - mg/kg	31.5	25	19.4	25.30	24.7	33.4	33.1	30.40	14	18.7	16.5	16.40	29.5	35.7	22.8	29.33
Total Nitrogen - %	0.092	0.074	0.05	0.07	0.116	0.05	0.051	0.07	0.065	0.05	0.05	0.06	0.1	0.05	0.05	0.07
Cadmium - mg/kg	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00
Organic Carbon - %	1.15	0.58	0.29	0.67	1.32	0.4	0.26	0.66	0.83	0.4	0.96	0.73	0.37	0.39	1.18	0.65
Total Phosphorus - mg/kg	270	158	132	186.67	253	157	180	196.67	202	127	129	152.67	209	159	0.8	122.93
Chromium - mg/kg	26	24	21	23.67	50	35	22	35.67	18	16	27	20.33	18	20	23	20.33
Chromium VI- mg/kg	4.1	0.5	0.5	1.70	3.8	0.5	0.5	1.60	0.5	0.5	0.5	0.50	3.9	0.5	0.5	1.63
Total Sulfur (LECO) - %	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Available Phosphorus (Bray P) - mg/kg	35.8	1.9	1.5	13.07	20.1	1.6	1	7.57	26.6	1.4	1	9.67	17.4	2.8	0.8	7.00
Exchangeable Aluminium - mg/kg	2.7	2.7	2.7	2.70	2.7	2.7	2.7	2.70	2.7	2.7	2.7	2.70	2.7	2.7	2.7	2.70
SAR - SAR Units	2.9	5.9	2.3	3.70	3.2	5	4.9	4.37	1.8	2.2	1	1.67	3.7	3.9	5.9	4.50
Chloride - mg/kg	89.1	105	28.5	74.20	63.8	78	106	82.60	55	75	44.9	58.30	136	113	129	126.00
CEC - cmol/kg	3.65	9.9	13.7	9.08	19.2	9.92	12.2	13.77	3.47	7.42	9.47	6.79	4.81	9.16	11.1	8.36
ESP - %of ECEC	10	9.6	4.9	8.17	7.7	8.8	9.3	8.60	3.3	4.4	7.5	5.07	5.8	6.7	9.4	7.30

GEELONG LEATHER PTY LTD - CULCAIRN

SOIL ANALYSIS 2019/2020

EPA ID LOCATION: 9, 10, 11, 12

EPA LICENSE NUMBER: 3465



Leather Naturally

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ANALYSIS	IRRIGATION SECTOR 9				IRRIGATION SECTOR 10				IRRIGATION SECTOR 11				IRRIGATION SECTOR 12			
	0-10 cm	10-30 cm	30-60 cm	AVE	0-10 cm	10-30 cm	30-60 cm	AVE	0-10 cm	10-30 cm	30-60 cm	AVE	0-10 cm	10-30 cm	30-60 cm	AVE
pH - pH units	5.3	5.18	6.42	5.63	5.49	6.37	8.47	6.78	5.4	5.42	6.46	5.76	5.57	6.07	6.33	5.99
Electrical Conductivity $\mu$ S/cm	280	380	350	336.67	320	210	350	293.33	690	460	340	496.67	640	710	300	550.00
TKN-N - mg/kg	1070	400	280	583.33	460	500	350	436.67	1190	470	300	653.33	690	430	350	490.00
Available Phosphorus (Colwell P) - mg/kg	3	3	3	3.00	3	3	3	3.00	3	3	16	7.33	57	8.1	7.7	24.27
Emerson Aggregate Class - Class	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Permability - mm/hr	40	3.75	2.5	15.42	3.75	2.5	3.75	3.33	40	2.5	3.75	15.42	2.5	3.75	3.75	3.33
Exchangeable Calcium - mg/kg	622	952	1102	892.00	706	964	1888	1186.00	728	552	928	736.00	596	1188	1256	1013.33
Exchangeable Magnesium - mg/kg	140	477	803	473.33	170	737	1232	713.00	276	354	830	486.67	83.1	803	856	580.70
Exchangeable Potassium - mg/kg	103	124	137	121.33	120	192	220	177.33	122	94.8	173	129.93	124	300	168	197.33
Exchangeable Sodium - mg/kg	242	440	485	389.00	191	312	520	341.00	540	391	438	456.33	364	756	277	465.67
Available Nitrate - mg/kg	22.1	31.4	6.8	20.10	15.4	1.2	8.2	8.27	5.4	20.4	10.9	12.23	77.9	34.6	3.9	38.80
Total Nitrogen - %	0.109	0.05	0.05	0.07	0.05	0.05	0.05	0.05	0.12	0.05	0.05	0.07	0.077	0.05	0.05	0.06
Cadnium - mg/kg	1	1	1	1.00	1	1	1	1.00	1	1	1	0.30	1	1	1	1.00
Organic Carbon - %	1.03	0.36	0.24	0.54	1.1	0.54	0.26	0.63	0.88	0.33	0.25	0.49	0.91	0.9	0.36	0.72
Total Phosphorus - mg/kg	234	128	10	124.00	250	125	114	163.00	265	147	137	183.00	237	127	191	185.00
Chromium - mg/kg	49	21	23	31.00	23	20	20	21.00	35	23	19	25.67	16	20	22	19.33
Chromium VI- mg/kg	3.9	0.5	0.5	1.63	3.9	0.5	3.8	2.73	0.5	4.1	0.5	1.70	4	0.5	0.5	1.67
Total Sulfur (LECO) - %	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Available Phosphorus (Bray P) - mg/kg	11.5	3.1	1	5.20	24.7	2.6	0.8	9.37	15.5	1.6	1.7	6.27	27.3	1.2	1.3	9.93
Exchangeable Aluminium - mg/kg	2.7	2.7	2.7	2.70	2.7	2.7	2.7	2.70	2.7	2.7	2.7	83.10	2.7	2.7	2.7	2.70
SAR - SAR Units	2.8	4.4	2.3	3.17	4.4	1.6	4	3.33	4.1	4.4	5.3	4.60	2.5	5.5	2.2	3.40
Chloride - mg/kg	66.6	94.9	47.7	69.73	77.8	70.7	40.5	63.00	216	129	83.1	142.70	150	236	126	170.67
CEC - cmol/kg	4.81	9.84	13.7	9.45	5.26	12	21.1	12.79	6.69	6.23	11.9	8.27	4.18	14.3	14.2	10.89
ESP - %of ECEC	5.2	8.3	8.9	7.47	0	5.4	4.8	3.40	6.6	4.7	0	3.77	4.8	7.4	3.5	5.23

GEELONG LEATHER PTY LTD - CULCAIRN

SOIL ANALYSIS 2019/2020

EPA ID LOCATION: 32, 33, 34

EPA LICENSE NUMBER: 3465



Leather Naturally

\*Not Tested (NT) No Sample (NS)

ANALYSIS	SLUDGE INJECTION AREA 1				SLUDGE INJECTION AREA 1B				SLUDGE INJECTION AREA 2				SLUDGE INJECTION AREA 3			
	0-10 cm	10-30 cm	30-60 cm	AVE	0-10 cm	10-30 cm	30-60 cm	AVE	0-10 cm	10-30 cm	30-60 cm	AVE	0-10 cm	10-30 cm	30-60 cm	AVE
pH - pH units	8.02	8.22	7.37	7.87	8.39	8.6	8.36	8.45	7.84	7.67	7.74	7.75	7.6	8.43	8.15	8.06
Electrical Conductivity $\mu$ S/cm	140	270	380	263.33	160	170	80	136.67	190	180	90	153.33	90	170	80	113.33
TKN-N - mg/kg	1230	710	480	806.67	1540	1500	320	1120.00	670	340	290	433.33	960	590	340	630.00
Available Phosphorus (Colwell P) - mg/kg	63	22	3	29.33	69	32	4	35.00	68	7.9	4	26.63	45	7.9	3	18.63
Emerson Aggregate Class - Class	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Permability - mm/hr	40	40	3.75	27.92	40	3.75	2.5	15.42	40	3.75	2.5	15.42	40	3.75	3.75	15.83
Exchangeable Calcium - mg/kg	1462	2100	912	1491.33	2260	2400	1464	2041.33	1544	1082	1568	1398.00	1410	1888	1352	1550.00
Exchangeable Magnesium - mg/kg	121	375	780	425.33	200	700	1192	697.33	91.9	326	542	319.97	171	532	1055	586.00
Exchangeable Potassium - mg/kg	195	192	186	191.00	260	149	137	182.00	119	111	170	133.33	203	169	193	188.33
Exchangeable Sodium - mg/kg	23	80.4	219	107.47	27	74.7	178	93.23	33.6	57.6	56.7	49.30	25.5	31	120	58.83
Available Nitrate - mg/kg	15.2	32.8	28.7	25.57	7	8	1.8	5.60	17.9	8	2.8	9.57	7.4	2	0.6	3.33
Total Nitrogen - %	0.124	0.074	0.051	0.08	0.155	0.151	0.05	0.12	0.069	0.05	0.05	0.06	0.097	0.059	0.05	0.07
Cadmium - mg/kg	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00
Organic Carbon - %	1.3	0.52	0.32	0.71	1.66	0.74	0.3	0.90	1.06	0.34	0.32	0.57	1.35	0.46	0.32	0.71
Total Phosphorus - mg/kg	334	180	126	213.33	432	220	118	256.67	332	125	150	202.33	276	126	140	180.67
Chromium - mg/kg	62	35	24	40.33	138	84	31	84.33	35	47	31	37.67	20	62	22	34.67
Chromium VI- mg/kg	4.1	0.5	0.5	1.70	0.5	0.5	0.5	0.50	3.9	0.5	0.5	1.63	3.8	0.5	0.5	1.60
Total Sulfur (LECO) - %	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Available Phosphorus (Bray P) - mg/kg	48.2	14.1	2.6	21.63	35.6	15.5	2.2	17.77	44.5	3.5	3.3	17.10	27.5	7.5	1.2	12.07
Exchangeable Aluminium - mg/kg	2.7	2.7	2.7	2.70	2.7	2.9	2.7	2.77	2.7	2.7	2.7	2.70	2.7	2.7	2.7	2.70
SAR - SAR Units	0.2	0.6	2.1	0.97	0.2	0.4	0.7	0.43	0.3	0.5	0.4	0.40	0.2	0.1	0.5	0.27
Chloride - mg/kg	15.2	15.9	84.5	38.53	28.3	11.4	53.5	31.07	9.63	22.9	23.3	18.61	16.3	11.2	41.6	23.03
CEC - cmol/kg	8.84	14.1	11.5	11.48	13.7	18.3	17.9	16.63	8.79	8.42	12.8	10.00	9.02	14.3	16.2	13.17
ESP - %of ECEC	0.5	0.6	0.8	0.63	0.3	0.7	2.7	1.23	0.2	0.6	0.9	0.57	0.6	0.5	1.8	0.97

GEELONG LEATHER PTY LTD - CULCAIRN

SOIL ANALYSIS 2019/2020

EPA ID LOCATION: 35, 36

EPA LICENSE NUMBER: 3465



Leather Naturally

\*Not Tested (NT) No Sample (NS)

ANALYSIS	SLUDGE INJECTION AREA 4				SLUDGE INJECTION AREA 5			
	0-10 cm	10-30 cm	30-60 cm	AVE	0-10 cm	10-30 cm	30-60 cm	AVE
pH - pH units	7.38	7.16	7.28	7.27	8.12	7.29	7.15	7.52
Electrical Conductivity $\mu$ S/cm	160	60	100	106.67	320	110	90	173.33
TKN-N - mg/kg	650	170	430	416.67	720	350	440	503.33
Available Phosphorus (Colwell P) - mg/kg	69	5	5.1	26.37	143	4	4	50.33
Emerson Aggregate Class - Class	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Permeability - mm/hr	40	40	2.5	27.50	40	2.5	2.5	15.00
Exchangeable Calcium - mg/kg	1072	1078	1540	1230.00	1978	1002	1048	1342.67
Exchangeable Magnesium - mg/kg	71.6	283	404	252.87	108	267	378	251.00
Exchangeable Potassium - mg/kg	140	101	111	117.33	75.7	95.2	124	98.30
Exchangeable Sodium - mg/kg	51.5	31	50.6	44.37	84.8	31.3	34	50.03
Available Nitrate - mg/kg	23	9.2	2.3	11.50	6.5	3.8	14	8.10
Total Nitrogen - %	0.067	0.05	0.05	0.06	0.073	0.05	0.05	0.06
Cadmium - mg/kg	1	1	1	1.00	1	1	1	1.00
Organic Carbon - %	0.97	0.25	0.33	0.52	1.06	0.33	0.4	0.60
Total Phosphorus - mg/kg	244	114	128	162.00	396	136	122	218.00
Chromium - mg/kg	17	10	17	14.67	11	21	16	16.00
Chromium VI- mg/kg	3.9	0.5	0.5	1.63	4	0.5	4	2.83
Total Sulfur (LECO) - %	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Available Phosphorus (Bray P) - mg/kg	45.2	3.6	2.5	17.10	64.7	2.6	2.4	23.23
Exchangeable Aluminium - mg/kg	2.7	2.7	2.7	2.70	2.7	2.7	2.7	2.70
SAR - SAR Units	0.5	0.3	0.4	0.40	0.6	0.3	0.3	0.40
Chloride - mg/kg	18.9	19.1	16.6	18.20	88.4	17.7	8.24	38.11
CEC - cmol/kg	6.36	8.03	11.4	8.60	11	7.49	8.71	9.07
ESP - %of ECEC	0.8	0.8	0.9	0.83	0.7	0.6	0.6	0.63