

GEELONG LEATHER PTY LTD - CULCAIRN

SOIL ANALYSIS 2017/2018

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	5.47	5.78	5.78	5.68	5.32	5.23	7.28	5.94	4.65	4.94	6.62	5.40	4.97	4.65	4.73	4.78
Electrical Conductivity $\mu\text{S}/\text{cm}$	150	140	270	186.67	220	330	300	283.33	520	130	130	260.00	820	710	570	700.00
TKN-N - mg/kg	1969	484	593	1015.33	3024	559	577	1386.67	3470	484	583	1512.33	2354	583	875	1270.67
Available Phosphorus (Colwell P) - mg/kg	52	9	8	23.00	77	20	18	38.33	88	11	24	41.00	105	18	22	48.33
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	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Exchangeable Calcium - mg/kg	730	596	1036	787.33	1292	1322	1732	1448.67	422	436	1642	833.33	880	900	1268	1016.00
Exchangeable Magnesium - mg/kg	103	183	357	214.33	178	434	645	419.00	67.6	98.2	553	239.60	122	62.6	221	135.20
Exchangeable Potassium - mg/kg	152	61.6	151	121.53	183	164	147	173.50	166	39	103	102.67	121	133	207	153.67
Exchangeable Sodium - mg/kg	33.2	135	349	172.40	162	428	630	406.67	286	87.2	305	226.07	591	390	435	472.00
Available Nitrate - mg/kg	31	14.8	6.8	17.53	75.8	41	19.5	45.43	130.9	15.2	11.5	52.53	46.4	17.1	24.8	29.43
Total Nitrogen - %	0.2	0.05	0.06	0.10	0.31	0.06	0.06	0.14	0.36	0.05	0.06	0.16	0.44	0.06	0.09	0.20
Cadnium - mg/kg	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00
Organic Carbon - %	1.26	0.46	0.4	0.71	1.67	0.5	0.39	0.85	1.06	0.45	0.39	0.63	1.3	0.39	0.29	0.66
Total Phosphorus - mg/kg	336	10	10	118.67	484	10	10	168.00	415	10	10	145.00	509	10	10	176.33
Chromium - mg/kg	197	20	23	80.00	107	25	26	52.67	85	25	27	45.67	168	24	33	75.00
Chromium VI- mg/kg	0.5	0.5	0.5	0.50	0.5	0.5	0.5	0.50	0.5	0.5	0.5	0.50	0.5	0.5	0.5	0.50
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	30.3	0.8	0.8	10.63	33.6	0.8	0.8	11.73	48.9	0.8	0.8	16.83	47.1	0.8	0.8	16.23
Exchangeable Aluminium - mg/kg	2.7	2.7	2.7	2.70	2.7	2.7	6.1	3.83	8	2.7	2.7	4.47	2.7	2.7	3.8	3.07
SAR - SAR Units	0.4	1.7	3.8	1.97	1.4	4.2	2	2.53	2.3	1.3	1.1	1.57	3	1.9	3	2.63
Chloride - mg/kg	37.1	29.1	25.6	30.60	39.1	46.9	214	100.00	92	46.5	224	120.83	146	90.3	118	118.10
CEC - cmol/kg	4.94	4.85	9.04	6.28	8.58	11.2	15.9	11.89	3.31	3.17	13.7	6.73	6.12	5.55	8.99	6.89
ESP - %of ECEC	0.6	4.85	9.04	4.83	1.9	5.5	9.7	5.70	3.9	1.8	5.4	3.70	6.2	3	3	4.07

GEELONG LEATHER PTY LTD - CULCAIRN

SOIL ANALYSIS 2017/2018

EPA ID LOCATION: 5, 6, 7, 8

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Leather Naturally

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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	5.34	5.25	6.57	5.72	5.34	5.47	6.65	5.82	6.47	7.14	8.37	7.33	6.3	5.82	6.19	6.10
Electrical Conductivity $\mu\text{S}/\text{cm}$	1790	400	470	886.67	710	540	930	726.67	1330	520	620	823.33	1030	410	710	716.67
TKN-N - mg/kg	2129	556	577	1087.33	2140	750	651	1180.33	2019	610	490	1039.67	2259	463	427	1049.67
Available Phosphorus (Colwell P) - mg/kg	129	28	21	59.33	91	18	23	44.00	82	24	21	42.33	59	16	17	30.67
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	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Exchangeable Calcium - mg/kg	1182	922	1994	1366.00	1684	1840	2640	2054.67	1448	2200	2460	2036.00	1372	762	1300	1144.67
Exchangeable Magnesium - mg/kg	172	309	537	339.33	214	345	540	366.33	153	337	447	312.33	120	99.7	371	196.90
Exchangeable Potassium - mg/kg	171	156	222	183.00	147	204	325	225.33	265	173	342	260.00	167	116	259	180.67
Exchangeable Sodium - mg/kg	1580	524	757	953.67	611	664	893	722.67	1240	611	825	892.00	820	325	692	612.33
Available Nitrate - mg/kg	374.6	34.4	22.1	143.70	162.9	50.4	49.2	87.50	276.8	87.9	105.6	156.77	239.1	37.3	72.7	116.37
Total Nitrogen - %	0.45	0.06	0.06	0.19	0.33	0.08	0.07	0.16	0.23	0.07	0.06	0.12	0.25	0.05	0.05	0.12
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 - %	1.22	0.33	0.24	0.60	2.39	0.3	0.35	1.01	0.74	0.34	0.25	0.44	0.84	0.32	0.26	0.47
Total Phosphorus - mg/kg	663	10	10	227.67	492	10	10	170.67	405	10	10	141.67	386	107	115	202.67
Chromium - mg/kg	166	22	23	70.33	94	26	22	47.33	52	22	22	32.00	90	17	22	43.00
Chromium VI- mg/kg	0.5	0.5	0.5	0.50	0.5	0.5	0.5	0.50	0.5	0.5	0.5	0.50	0.5	0.5	0.5	0.50
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	75.3	0.8	0.8	25.63	35.7	0.8	0.8	12.43	56.7	0.8	0.8	19.43	50.8	0.8	0.8	17.47
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	6.7	6.4	5.3	6.13	3	5.1	3.8	3.97	5.6	3.3	3.8	4.23	5.4	2.6	4.1	4.03
Chloride - mg/kg	652	76.9	148	292.30	104	88.7	114	102.23	505	207	112	274.67	305	55.7	95.1	151.93
CEC - cmol/kg	8.49	8.26	16.2	10.98	11.2	13.4	19.5	14.70	10	14.8	17.9	14.23	8.8	5.17	11	8.32
ESP - %of ECEC	8.2	8.4	7.8	8.13	5.7	6.1	5.3	5.70	8.4	4	5.9	6.10	6	4.8	6.9	5.90

GEELONG LEATHER PTY LTD - CULCAIRN

SOIL ANALYSIS 2017/2018

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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	5.45	5.32	5.42	5.40	5.53	6.16	6.34	6.01	5.46	5.19	6.47	5.71	6.2	5.67	7.22	6.36
Electrical Conductivity μ S/cm	170	140	250	186.67	210	190	220	206.67	300	230	390	306.67	290	360	600	416.67
TKN-N - mg/kg	1655	691	598	981.33	1262	484	591	779.00	2319	478	577	1124.67	1400	661	532	864.33
Available Phosphorus (Colwell P) - mg/kg	56	15	10	27.00	56	14	13	27.67	83	12	18	37.67	74	17	16	35.67
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	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Exchangeable Calcium - mg/kg	862	854	1202	972.67	280	472	634	462.00	374	206	596	392.00	392	602	1116	703.33
Exchangeable Magnesium - mg/kg	154	342	717	404.33	50	153	304	169.00	76.1	81	268	141.70	64.2	190	567	273.73
Exchangeable Potassium - mg/kg	147	64.7	165	125.57	68.6	60.5	112	80.37	54.2	41	111	68.73	102	31.6	178	103.87
Exchangeable Sodium - mg/kg	131	248	477	285.33	79	113	156	116.00	156	115	321	197.33	84.5	278	394	252.17
Available Nitrate - mg/kg	45.3	7.3	2.3	18.30	38.1	15	9	20.70	81.2	21.6	23	41.93	104.5	35.8	67.8	69.37
Total Nitrogen - %	0.17	0.07	0.06	0.10	0.13	0.05	0.06	0.08	0.24	0.05	0.06	0.12	0.15	0.07	0.06	0.09
Cadmium - mg/kg	1	1	1	1.00	1	1	1	1.00	1	1	1	0.30	1	1	1	1.00
Organic Carbon - %	0.45	0.34	0.3	0.36	0.4	0.32	0.25	0.32	0.99	0.41	0.32	0.57	0.38	0.27	0.28	0.31
Total Phosphorus - mg/kg	371	10	10	130.33	345	10	10	121.67	474	10	10	164.67	370	10	10	130.00
Chromium - mg/kg	38	24	23	28.33	28	21	24	24.33	69	21	21	37.00	35	22	26	27.67
Chromium VI- mg/kg	0.5	0.5	0.5	0.50	0.5	0.5	0.5	0.50	0.5	0.5	0.5	0.50	0.5	0.5	0.5	0.50
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	5.9	0.8	0.8	2.50	37.7	0.8	0.8	13.10	55.6	0.8	0.8	19.07	46.5	0.8	0.8	16.03
Exchangeable Aluminium - mg/kg	2.7	15.3	2.7	6.90	2.7	2.7	2.7	2.70	2.7	3.1	2.7	77.70	2.7	2.7	2.7	2.70
SAR - SAR Units	1.5	2	6	3.17	2.2	2.6	4.5	3.10	3.4	4	8.4	5.27	2	3.3	4	3.10
Chloride - mg/kg	60	76.2	30	55.40	58.8	75.1	59.6	64.50	62.8	54.4	77.7	64.97	66.9	170	182	139.63
CEC - cmol/kg	6.15	7.95	13.4	9.17	2.02	3.77	5.95	3.91	2.66	1.83	5.46	3.32	2.75	4.68	10.7	6.04
ESP - %of ECEC	2.8	6.8	8	5.87	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00

GEELONG LEATHER PTY LTD - CULCAIRN

SOIL ANALYSIS 2017/2018

EPA ID LOCATION: NA

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	8.29	8.65	8.44	8.46	NT	NT	NT	#DIV/0!	7.46	7.64	7.52	7.54	5.71	6.99	6.63	6.44
Electrical Conductivity µS/cm	180	130	120	143.33	NT	NT	NT	#DIV/0!	240	90	80	136.67	100	40	220	120.00
TKN-N - mg/kg	862	586	490	646.00	NT	NT	NT	#DIV/0!	1046	487	591	708.00	883	397	694	658.00
Available Phosphorus (Colwell P) - mg/kg	16	74	26	38.67	NT	NT	NT	#DIV/0!	55	13	10	26.00	87	21	17	41.67
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	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Exchangeable Calcium - mg/kg	1156	810	630	865.33	NT	NT	NT	#DIV/0!	574	510	620	568.00	382	284	1990	885.33
Exchangeable Magnesium - mg/kg	81.6	185	294	186.87	NT	NT	NT	#DIV/0!	47.1	64.4	267	126.17	30	47.3	1574	550.43
Exchangeable Potassium - mg/kg	121	56.6	66.3	81.30	NT	NT	NT	#DIV/0!	66.3	30	77.6	57.97	42.9	48.8	129	73.57
Exchangeable Sodium - mg/kg	12.7	17.5	35.9	22.03	NT	NT	NT	#DIV/0!	51.6	24	20.5	32.03	6.41	5.3.5	142	74.21
Available Nitrate - mg/kg	37.6	13.3	9.4	20.10	NT	NT	NT	#DIV/0!	53.9	10.7	8.6	24.40	16.9	3.2	5.3	8.47
Total Nitrogen - %	0.19	0.06	0.05	0.10	NT	NT	NT	#DIV/0!	0.11	0.05	0.06	0.07	0.09	0.04	0.07	0.07
Cadmium - mg/kg	1	1	1	1.00	NT	NT	NT	#DIV/0!	1	1	1	1.00	1	1	1	1.00
Organic Carbon - %	0.9	0.58	0.5	0.66	NT	NT	NT	#DIV/0!	0.88	0.64	0.42	0.65	0.74	0.5	0.46	0.57
Total Phosphorus - mg/kg	369	10	10	129.67	NT	NT	NT	#DIV/0!	310	10	10	110.00	315	10	10	111.67
Chromium - mg/kg	112	23	25	53.33	NT	NT	NT	#DIV/0!	18	19	25	20.67	14	11	29	18.00
Chromium VI- mg/kg	0.5	0.5	0.5	0.50	NT	NT	NT	#DIV/0!	0.5	0.5	0.5	0.50	0.5	0.5	0.5	0.50
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	15	0.8	0.8	5.53	NT	NT	NT	#DIV/0!	27.8	0.8	0.8	9.80	33	0.8	0.8	11.53
Exchangeable Aluminium - mg/kg	2.7	2.7	2.7	2.70	NT	NT	NT	#DIV/0!	2.7	2.7	2.7	2.70	2.7	2.7	2.7	2.70
SAR - SAR Units	0.2	0.3	0.6	0.37	NT	NT	NT	#DIV/0!	1	0.5	0.4	0.63	0.1	0.1	0.8	0.33
Chloride - mg/kg	34.7	41.3	38.2	38.07	NT	NT	NT	#DIV/0!	56.7	80.2	36.8	57.90	40.5	26	36	34.17
CEC - cmol/kg	5.73	6.76	5.72	6.07	NT	NT	NT	#DIV/0!	3.43	3.1	5.49	4.01	2.3	1.94	23.4	9.21
ESP - %of ECEC	0	0	0	0.00	NT	NT	NT	#DIV/0!	0	0	0	0.00	0	0.4	1	0.47

GEELONG LEATHER PTY LTD - CULCAIRN

SOIL ANALYSIS 2017/2018

EPA ID LOCATION: NA

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	7.72	8.5	7.53	7.92	7.71	7.07	6.3	7.03
Electrical Conductivity μ S/cm	120	150	80	116.67	140	40	190	123.33
TKN-N - mg/kg	1085	680	590	785.00	1388	195	488	690.33
Available Phosphorus (Colwell P) - mg/kg	80	40	19	46.33	71	12	13	32.00
Emerson Aggregate Class - Class	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Permeability - mm/hr	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Exchangeable Calcium - mg/kg	1100	1606	1362	1356.00	1562	236	1282	1026.67
Exchangeable Magnesium - mg/kg	118	220	444	260.67	64.9	32.3	670	255.73
Exchangeable Potassium - mg/kg	220	61.6	34.7	105.43	202	30	140	124.00
Exchangeable Sodium - mg/kg	8.17	25.7	55.3	29.72	9.54	9.36	88.6	35.83
Available Nitrate - mg/kg	15.2	20.1	8.2	14.50	11.8	4.7	11.7	9.40
Total Nitrogen - %	0.11	0.07	0.06	0.08	0.14	0.02	0.05	0.07
Cadmium - mg/kg	1	1	1	1.00	1	1	1	1.00
Organic Carbon - %	1.16	0.54	0.34	0.68	1	0.72	0.31	0.68
Total Phosphorus - mg/kg	327	106	10	147.67	444	10	10	154.67
Chromium - mg/kg	20	36	20	25.33	17	9	32	19.33
Chromium VI- mg/kg	0.5	0.5	0.5	0.50	0.5	0.5	0.5	0.50
Total Sulfur (LECO) - %	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Available Phosphorus (Bray P) - mg/kg	47.7	0.8	0.8	16.43	42.8	0.8	0.8	14.80
Exchangeable Aluminium - mg/kg	2.7	2.7	2.7	2.70	2.7	2.7	2.7	2.70
SAR - SAR Units	0.1	0.2	0.4	0.23	0.1	0.2	0.6	0.30
Chloride - mg/kg	25.4	36.3	63	41.57	28.9	24.8	24.9	26.20
CEC - cmol/kg	7.04	10	10.6	9.21	8.87	1.52	12.4	7.60
ESP - %of ECEC	0.2	0.3	0.8	0.43	0.2	0.7	1	0.63