

GEELONG LEATHER PTY LTD - CULCAIRN

SOIL ANALYSIS 2018/2019

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	5.49	5.55	6.78	5.94	4.99	5.53	7.03	5.85	4.51	4.55	6.3	5.12	5.52	4.67	4.81	5.00
Electrical Conductivity µS/cm	570	470	1170	736.67	880	590	490	653.33	400	220	170	263.33	660	1020	1010	896.67
TKN-N - mg/kg	1550	752	774	1025.33	1828	1264	669	1253.67	2761	573	491	1275.00	7851	689	990	3176.67
Available Phosphorus (Colwell P) - mg/kg	54	13	8.4	25.13	56	9.9	7.5	24.47	59	17	6.1	27.37	96	20	25	47.00
Emerson Aggregate Class - Class	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
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	1358	1380	3280	2006.00	1446	1872	1864	1727.33	432	552	1574	852.67	1740	1528	1804	1690.67
Exchangeable Magnesium - mg/kg	218	317	426	320.33	215	439	705	453.00	85	146	722	317.67	275	107	365	249.00
Exchangeable Potassium - mg/kg	268	279	333	293.33	297	222	262	259.50	153	98.3	328	193.10	311	138	294	247.67
Exchangeable Sodium - mg/kg	399	403	417	406.33	613	599	506	572.67	243	152	295	230.00	444	474	505	474.33
Available Nitrate - mg/kg	49.6	47.8	25.8	41.07	72.5	36.4	31.1	46.67	38.8	26.7	8.9	24.80	48.8	11.2	9.7	23.23
Total Nitrogen - %	0.16	0.08	0.08	0.11	0.19	0.13	0.07	0.13	0.28	0.06	0.05	0.13	0.79	0.07	0.1	0.32
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 - %	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Total Phosphorus - mg/kg	330	181	139	216.67	501	101	133	245.00	580	112	125	272.33	985	165	144	431.33
Chromium - mg/kg	128	26	62	72.00	74	23	33	43.33	59	21	34	38.00	263	36	82	127.00
Chromium VI- mg/kg	5	5	0.5	3.50	5	0.5	0.5	2.00	5	0.5	0.5	2.00	5	0.5	0.5	2.00
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	28.2	2.1	2.8	11.03	32.2	0.8	0.8	11.27	39.7	1.5	0.8	14.00	72.8	10.9	8.2	30.63
Exchangeable Aluminium - mg/kg	3.1	2.7	2.7	2.83	3.5	2.7	2.7	2.97	14.3	15.6	2.7	10.87	4	2.7	2.7	3.13
SAR - SAR Units	2.2	3.1	0.8	2.03	2.6	3.3	2.8	2.90	2.3	2	3.9	2.73	1.8	1.2	1.3	1.43
Chloride - mg/kg	64.3	98.2	45.9	69.47	66.9	57.3	63.3	62.50	75.6	56.7	33.8	55.37	56.1	49.7	44.3	50.03
CEC - cmol/kg	10.5	11.2	21.7	14.47	11.4	15.2	17.4	14.67	4	4.59	15.5	8.03	13.2	10.5	14.6	12.77
ESP - %of ECEC	11.1	8.9	4.5	8.17	14.1	11	9.2	11.43	14.8	4.4	5.6	8.27	11	15.6	12.5	13.03

**GEELONG LEATHER PTY LTD - CULCAIRN**

**SOIL ANALYSIS 2018/2019**

EPA ID LOCATION: 5, 6, 7, 8

EPA LICENSE NUMBER: 3465



*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	5.26	4.97	5.72	5.32	5.13	5.18	7.21	5.84	5.72	8.64	8.49	7.62	5.89	5.17	6.28	5.78
Electrical Conductivity $\mu$ S/cm	690	640	590	640.00	620	530	600	583.33	1150	1030	1140	1106.67	1040	670	550	753.33
TKN-N - mg/kg	964	868	486	772.67	1674	669	584	975.67	1265	568	561	798.00	1164	571	345	693.33
Available Phosphorus (Colwell P) - mg/kg	49	24	6	26.33	65	11	10	28.67	42	7.9	4.6	18.17	59	9.2	7	25.07
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	1028	898	1886	1270.67	1532	1680	2160	1790.67	1320	2300	3520	2380.00	1346	874	1212	1144.00
Exchangeable Magnesium - mg/kg	178	231	508	305.67	284	453	928	555.00	226	259	559	348.00	159	170	316	215.00
Exchangeable Potassium - mg/kg	151	171	256	192.67	203	241	308	250.67	248	275	384	302.33	196	171	270	212.33
Exchangeable Sodium - mg/kg	526	623	771	640.00	573	672	960	735.00	901	974	1130	1001.67	536	603	583	574.00
Available Nitrate - mg/kg	36.5	31.6	14.3	27.47	26	31.2	16.5	24.57	35.3	31.8	39.5	35.53	35.5	28.9	25.4	29.93
Total Nitrogen - %	0.1	0.09	0.05	0.08	0.17	0.07	0.06	0.10	0.13	0.06	0.06	0.08	0.12	0.06	0.037	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 - %	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Total Phosphorus - mg/kg	295	197	105	199.00	618	135	112	288.33	368	155	10	177.67	257	146	179	194.00
Chromium - mg/kg	42	24	25	30.33	51	26	22	33.00	28	17	22	22.33	64	21	20	35.00
Chromium VI- mg/kg	5	5	0.5	3.50	5	5	0.5	3.50	5	0.5	0.5	2.00	5	0.5	0.5	2.00
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	25.8	7.9	0.8	11.50	20.7	0.8	0.8	7.43	33.1	0.8	0.8	11.57	47.6	1.1	0.8	16.50
Exchangeable Aluminium - mg/kg	2.7	2.7	2.7	2.70	2.9	2.7	2.7	2.77	2.7	2.7	2.7	2.70	2.7	2.7	2.7	2.70
SAR - SAR Units	2.9	4	5.4	4.10	2.8	5.2	4.7	4.23	2.7	4.2	2.6	3.17	1.3	3.7	5.7	3.57
Chloride - mg/kg	52.8	52.9	52.1	52.60	52.4	78.7	48.5	59.87	61.6	67	83.3	70.63	50.7	58	53.9	54.20
CEC - cmol/kg	8.87	9.06	16.6	11.51	12.3	14.5	22.9	16.57	12.5	17.8	27.6	19.30	10.5	8.44	11.5	10.15
ESP - %of ECEC	20.9	24.4	14.3	19.87	14	11.8	16	13.93	27.7	19.4	16.1	21.07	18.3	26.2	18.6	21.03

GEELONG LEATHER PTY LTD - CULCAIRN

SOIL ANALYSIS 2018/2019

EPA ID LOCATION: 9, 10, 11, 12

EPA LICENSE NUMBER: 3465



Leather Naturally

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

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	5.48	5.43	5.67	5.53	5.43	5.96	6.21	5.87	5.04	4.81	5.25	5.03	5.59	6.01	7.2	6.27
Electrical Conductivity $\mu$ S/cm	100	130	220	150.00	210	240	180	210.00	500	600	470	523.33	500	560	530	530.00
TKN-N - mg/kg	1472	445	479	798.67	590	265	557	470.67	1347	1147	565	1019.67	956	622	647	741.67
Available Phosphorus (Colwell P) - mg/kg	36	6.4	4.1	15.50	34	7	4.9	15.30	57	31	4	30.67	59	7.7	36	34.23
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	922	986	1494	1134.00	598	708	1222	842.67	650	506	1176	777.33	660	1908	1974	1514.00
Exchangeable Magnesium - mg/kg	154	406	933	497.67	124	205	636	321.67	157	142	573	290.67	126	747	1143	672.00
Exchangeable Potassium - mg/kg	225	123	147	165.00	193	167	232	197.33	166	144	260	190.00	166	445	367	326.00
Exchangeable Sodium - mg/kg	58.7	255	561	291.57	172	204	234	203.33	414	453	652	506.33	370	729	641	580.00
Available Nitrate - mg/kg	28	4.9	21.4	18.10	10.2	4.5	43	19.23	52.8	53.2	35.3	47.10	44.3	77.7	53.2	58.40
Total Nitrogen - %	0.15	0.045	0.05	0.08	0.06	0.027	0.06	0.05	0.14	0.12	0.06	0.11	0.1	0.07	0.07	0.08
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 - %	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Total Phosphorus - mg/kg	396	10	10	138.67	133	10	10	51.00	256	198	10	154.67	214	10	10	78.00
Chromium - mg/kg	55	25	24	34.67	24	19	23	22.00	98	47	22	55.67	27	24	31	27.33
Chromium VI- mg/kg	0.5	0.5	0.5	0.50	0.5	0.5	0.5	0.50	5	5	0.5	3.50	5	0.5	5	3.50
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	13.2	0.8	0.8	4.93	18.7	0.8	0.8	6.77	28.5	16.8	0.8	15.37	37.5	0.8	16.5	18.27
Exchangeable Aluminium - mg/kg	8.9	13	7.3	9.73	6.6	3.8	5.5	5.30	2.7	3.8	6	81.20	5	3.7	3.8	4.17
SAR - SAR Units	1.1	2.9	6.1	3.37	2.6	2.3	3.6	2.83	3.9	3.9	6.5	4.77	3.2	5.1	3.3	3.87
Chloride - mg/kg	31	40.1	58.2	43.10	55.5	40.1	31.8	42.47	72.8	81.5	81.2	78.50	96.5	161	108	121.83
CEC - cmol/kg	6.65	9.45	17.3	11.13	4.9	6.22	12.4	7.84	5.66	4.64	12.8	7.70	5.25	18.2	21.5	14.98
ESP - %of ECEC	1.5	7.7	10.2	6.47	6.5	9.2	4.1	6.60	11.8	11.7	11.3	11.60	8.3	7.8	6.1	7.40

GEELONG LEATHER PTY LTD - CULCAIRN

SOIL ANALYSIS 2018/2019

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	8.52	8.68	8.39	8.53	8.68	9.02	8.68	8.79	8.31	8.57	7.5	8.13	8.31	8.56	7.97	8.28
Electrical Conductivity $\mu$ S/cm	220	270	170	220.00	130	100	150	126.67	200	210	150	186.67	410	370	130	303.33
TKN-N - mg/kg	1545	1250	691	1162.00	1395	430	561	795.33	1271	690	441	800.67	1567	1490	297	1118.00
Available Phosphorus (Colwell P) - mg/kg	76	30	7.5	37.83	57	10	23	30.00	78	18	12	36.00	55	45	5.6	35.20
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	2480	2440	1620	2180.00	2340	1494	2100	1978.00	2120	1562	1564	1748.67	2100	2860	2560	2506.67
Exchangeable Magnesium - mg/kg	185	312	741	412.67	160	86.3	387	211.10	86.4	200	554	280.13	185	766	1708	886.33
Exchangeable Potassium - mg/kg	250	159	134	181.00	327	126	223	225.33	197	209	229	211.67	174	157	195	175.33
Exchangeable Sodium - mg/kg	36.1	67.1	116	73.07	12.9	14.6	39.8	22.43	42.9	58.3	29.8	43.67	128	97.5	127	117.50
Available Nitrate - mg/kg	55.1	50.3	9.4	38.27	5	10.3	39.2	18.17	29.2	10.1	49.2	29.50	32.9	10	23.1	22.00
Total Nitrogen - %	0.16	0.13	0.07	0.12	0.14	0.044	0.06	0.08	0.13	0.07	0.049	0.08	0.16	0.15	0.032	0.11
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 - %	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Total Phosphorus - mg/kg	386	164	178	242.67	366	138	102	202.00	266	137	107	170.00	278	207	10	165.00
Chromium - mg/kg	301	91	28	140.00	380	48	142	190.00	30	25	26	27.00	29	61	31	40.33
Chromium VI- mg/kg	5	0.5	0.5	2.00	5	0.5	0.5	2.00	5	0.5	0.5	2.00	5	0.5	0.5	2.00
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	32.8	15.2	0.8	16.27	39.4	8.4	12.9	20.23	55.9	8.7	0.8	21.80	47.6	14.6	0.8	21.00
Exchangeable Aluminium - mg/kg	8	6.6	4.8	6.47	5.6	6.7	5.4	5.90	18.9	7.7	2.7	9.77	4.5	10.5	3.8	6.27
SAR - SAR Units	0.2	0.4	0.9	0.50	0.1	0.1	0.3	0.17	0.3	0.4	0.2	0.30	0.8	0.5	0.9	0.73
Chloride - mg/kg	35.2	30.2	31.6	32.33	30.9	29.1	34.1	31.37	32.5	31.2	48.7	37.47	34.8	27.6	28.3	30.23
CEC - cmol/kg	14.7	15.3	14.7	14.90	13.9	8.53	14.3	12.24	11.9	10.1	13	11.67	12.6	21.2	27.6	20.47
ESP - %of ECEC	0.6	0.6	1.5	0.90	0.1	0.4	0.6	0.37	0.5	1	0.4	0.63	0.9	1.1	1.1	1.03

GEELONG LEATHER PTY LTD - CULCAIRN

SOIL ANALYSIS 2018/2019

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	8.45	8.35	7.11	7.97	8.6	8.76	8.3	8.55
Electrical Conductivity $\mu$ S/cm	150	120	90	120.00	150	180	260	196.67
TKN-N - mg/kg	895	347	267	503.00	583	971	583	712.33
Available Phosphorus (Colwell P) - mg/kg	63	9.8	45	39.27	65	42	28	45.00
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	1878	1678	1614	1723.33	1866	2060	2800	2242.00
Exchangeable Magnesium - mg/kg	75.4	229	608	304.13	68.9	120	456	214.97
Exchangeable Potassium - mg/kg	129	81.5	131	113.83	109	58.5	146	104.50
Exchangeable Sodium - mg/kg	10.1	36.3	97	47.80	9.94	20.8	81.7	37.48
Available Nitrate - mg/kg	4.9	2.7	2.5	3.37	17.1	28.8	17.2	21.03
Total Nitrogen - %	0.09	0.035	0.027	0.05	0.06	0.1	0.06	0.07
Cadmium - mg/kg	1	1	1	1.00	1	1	1	1.00
Organic Carbon - %	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Total Phosphorus - mg/kg	224	10	163	132.33	273	207	10	163.33
Chromium - mg/kg	20	17	20	19.00	25	39	28	30.67
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	55.3	2.9	4.9	21.03	42.5	16.8	13.5	24.27
Exchangeable Aluminium - mg/kg	11.9	6.8	5.9	8.20	6.2	4.2	8.1	6.17
SAR - SAR Units	0	0.3	1.3	0.53	0	0.1	0.5	0.20
Chloride - mg/kg	27.5	27.6	28	27.70	31.3	29.7	29.8	30.27
CEC - cmol/kg	10.4	10.5	13.6	11.50	10.2	11.5	18.2	13.30
ESP - %of ECEC	0.2	0.6	1.8	0.87	0.3	0.3	0.6	0.40