

GEELONG LEATHER PTY LTD - CULCAIRN

SOIL ANALYSIS 2015/2016

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	5.19	4.91	6.9	5.67	5.08	5.6	5.42	5.37	8.49	7.55	7.19	7.74	4.52	5.36	5.73	5.20
Electrical Conductivity µS/cm	120	370	500	330.00	230	590	660	493.33	140	810	1010	653.33	1970	1400	1630	1666.67
TKN-N - mg/kg	1486	460	536	827.33	2578	530	428	1178.67	1390	375	282	682.33	2189	575	448	1070.67
Available Phosphorus (Colwell P) - mg/kg	66	3	3	24.00	66	5	3	24.67	42	4	3	16.33	34	6	3	14.33
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	854	1390	1740	1328.00	868	1162	1734	1254.67	2100	1352	1510	1654.00	2500	2560	2160	2406.67
Exchangeable Magnesium - mg/kg	121	479	1085	561.67	159	272	558	329.67	173	70.9	294	179.30	12.6	561	889	487.53
Exchangeable Potassium - mg/kg	137	197	293	209.00	220	158	167	189.00	294	73.7	85.8	151.17	65.1	282	319	222.03
Exchangeable Sodium - mg/kg	143	635	917	565.00	187	512	710	469.67	87.9	50.8	291	143.23	81.7	982	1630	897.90
Available Nitrate - mg/kg	13.7	39.5	64	39.07	21.7	69.7	72.1	54.50	9.6	24.8	17.8	17.40	11	24.7	51.8	29.17
Total Nitrogen - %	0.15	0.05	0.06	0.09	0.26	0.06	0.05	0.12	0.14	0.04	0.03	0.07	0.22	0.06	0.05	0.11
Cadmium - mg/kg	0.1	0.2	0.1	0.13	0.1	0.3	0.2	0.20	0.1	0.1	0.1	0.10	0.1	0.3	0.20.13	0.20
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	266	64.3	61.3	130.53	294	108	65.7	155.90	222	102	53.9	125.97	233	78.1	57.7	122.93
Chromium - mg/kg	50	21	15	28.67	65	230	24	106.33	70	9	11	30.00	31	25	18	24.67
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	39.4	1	0.8	13.73	41.2	2.3	0.8	14.77	19	3.1	0.8	7.63	17.8	0.8	0.8	6.47
Exchangeable Aluminium - mg/kg	19.1	49.6	2.7	23.80	11.6	2.7	2.7	5.67	2.7	2.7	3.7	3.03	10.2	2.7	3.3	5.40
SAR - SAR Units	1.5	3.9	6.2	3.87	2	3.4	4	3.13	0.7	0.1	0.9	0.57	0.2	3	4.9	2.70
Chloride - mg/kg	22.7	36.3	53.3	37.43	22.6	51.8	60.8	45.07	22	26.8	23.3	24.03	16.6	26	60.8	34.47
CEC - cmol/kg	6.1	13.4	20.5	13.33	6.6	9.1	14.8	10.17	12.8	7.6	10.5	10.30	12.9	19.2	21.2	17.77
ESP - %of ECEC	4.5	10.9	10.6	8.67	3.8	6.5	7.4	5.90	1	0.9	2.6	1.50	0.4	5.6	10.8	5.60

GEELONG LEATHER PTY LTD - CULCAIRN

SOIL ANALYSIS 2015/2016

EPA ID LOCATION: 5, 6, 7, 8

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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	5.39	5.07	5.21	5.22	5.06	5	5.1	5.05	5.44	5.19	7.05	5.89	5.75	5.27	6.01	5.68
Electrical Conductivity μ S/cm	260	360	490	370.00	450	300	300	350.00	70	220	260	183.33	40	170	290	166.67
TKN-N - mg/kg	1281	472	447	733.33	2147	577	578	1100.67	891	486	379	585.33	1092	492	380	654.67
Available Phosphorus (Colwell P) - mg/kg	24	3	5	10.67	26.3	2.4	0.8	9.83	31	3	3	12.33	32	3	3	1.60
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	706	394	1162	754.00	1114	1380	1664	1386.00	702	1038	1220	986.67	536	622	1232	796.67
Exchangeable Magnesium - mg/kg	153	126	244	174.33	212	387	717	438.67	135	387	615	379.00	104	215	521	280.00
Exchangeable Potassium - mg/kg	128	126	149	134.33	94.8	137	182	137.93	78	30	30	46.00	142	125	164	143.67
Exchangeable Sodium - mg/kg	287	274	416	325.67	420	386	465	423.67	108	381	562	350.33	22.4	189	384	198.47
Available Nitrate - mg/kg	18.3	27.6	52.8	32.90	52.8	23.2	21.9	32.63	8.6	12.8	17.8	13.07	7.6	7.7	20.3	11.87
Total Nitrogen - %	0.13	0.05	0.05	0.08	0.22	0.06	0.06	0.11	0.09	0.05	0.04	0.06	0.11	0.05	0.04	0.07
Cadmium - mg/kg	0.1	0.1	0.2	0.13	0.2	0.2	0.2	0.20	0.1	0.2	0.2	0.17	0.1	0.2	0.2	0.17
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	219	122	176	172.33	336	108	85.3	176.43	188	68.5	58.5	105.00	203	114	109	142.00
Chromium - mg/kg	17	15	19	17.00	30	20	20	23.33	19	21	19	19.67	23	15	18	18.67
Chromium VI- mg/kg	0.5	0.5	0.5	0.50	0.6	0.5	0.5	0.53	0.6	0.5	0.5	0.53	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	17.7	1	1.6	6.77	26.3	2.4	0.8	9.83	21.3	0.8	0.8	7.63	30.5	1.6	0.8	10.97
Exchangeable Aluminium - mg/kg	8.9	2.7	2.7	4.77	13.1	54.1	14.4	27.20	14.9	18.4	2.7	12.00	3.4	7.7	2.7	4.60
SAR - SAR Units	3.6	3	2.8	3.13	3.3	3.3	3.6	3.40	1.1	1.8	1.4	1.43	0.3	3	3.8	2.37
Chloride - mg/kg	27.6	33.7	48.7	36.67	56.2	32.1	28.2	38.83	24.8	38.1	88.3	50.40	20.6	20.8	24	21.80
CEC - cmol/kg	5.6	3.6	8.7	5.97	8.2	11.8	15.9	11.97	5.2	9.5	12.5	9.07	4	5.6	11.6	7.07
ESP - %of ECEC	6.9	6.3	5.8	6.33	6.1	6.3	6.6	6.33	4.1	9	10.7	7.93	0.9	6	6.3	4.40

GEELONG LEATHER PTY LTD - CULCAIRN

SOIL ANALYSIS 2015/2016

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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	5.67	5.18	5.02	5.29	5.65	5.18	5.21	5.35	5.15	6.13	7.64	6.31	5.55	6.91	7.88	6.78
Electrical Conductivity μ S/cm	50	120	380	183.33	70	190	290	183.33	150	200	330	226.67	90	140	110	113.33
TKN-N - mg/kg	494	293	491	426.00	493	193	486	390.67	1071	571	582	741.33	583	474	480	512.33
Available Phosphorus (Colwell P) - mg/kg	21	3	3	9.00	21	3	23	15.67	3	3	3	3.00	21	3	3	9.00
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	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Exchangeable Calcium - mg/kg	418	424	1268	703.33	504	642	1102	749.33	888	1254	1542	1228.00	728	1832	1812	1457.33
Exchangeable Magnesium - mg/kg	44.8	106	777	309.27	68.7	178	509	251.90	212	488	1037	579.00	111	389	292	264.00
Exchangeable Potassium - mg/kg	45.6	30	240	105.20	67.9	106	223	132.30	229	30	30	96.33	194	303	30	175.67
Exchangeable Sodium - mg/kg	52.9	126	557	245.30	63.2	146	315	174.73	128	473	892	497.67	11.7	94	246	117.23
Available Nitrate - mg/kg	5.6	6.3	8.8	6.90	6.4	7.2	14.4	9.33	28	24.5	2.8	18.43	15.5	24.3	15.7	18.50
Total Nitrogen - %	0.05	0.03	0.05	0.04	0.05	0.02	0.05	0.04	0.11	0.06	0.06	0.08	0.06	0.05	0.05	0.05
Cadmium - mg/kg	0.1	0.1	0.2	0.13	0.1	0.1	0.2	0.13	0.2	0.2	0.2	0.30	0.1	0.3	0.2	0.20
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	107	70.8	51	76.27	138	89	69.1	98.70	213	76.2	58.2	115.80	134	109	91.6	111.53
Chromium - mg/kg	12	13	17	14.00	13	17	21	17.00	30	20	17	22.33	14	22	16	17.33
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	18.9	5.4	0.8	8.37	16.4	2	0.8	6.40	13.8	0.8	0.8	5.13	17.7	0.8	0.8	6.43
Exchangeable Aluminium - mg/kg	2.7	10	25	12.57	2.7	4	2.7	3.13	14.6	4	2.7	136.00	2.7	2.7	2.7	2.70
SAR - SAR Units	0.9	1.4	4.8	2.37	0.9	1.8	3.2	1.97	1.4	1.1	1.6	1.37	0.1	0.5	0.6	0.40
Chloride - mg/kg	20.2	28.3	21	23.17	24.7	17.5	22.7	21.63	26	125	136	95.67	47.5	39.8	88.7	58.67
CEC - cmol/kg	2.7	3.3	14.7	6.90	3.4	5.2	10.8	6.47	7.1	11.5	18.6	12.40	5.1	13.3	12.1	10.17
ESP - %of ECEC	2.9	5.3	7.7	5.30	2.7	3.7	5	3.80	2.9	10.1	12.8	8.60	0.2	1.4	5.2	2.27

GEELONG LEATHER PTY LTD - CULCAIRN

SOIL ANALYSIS 2015/2016

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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	8.42	8.5	7.87	8.26	8	7.67	7.44	7.70	8.54	8.53	6.55	7.87	5.26	7.22	7.13	6.54
Electrical Conductivity μ S/cm	140	180	170	163.33	130	120	140	130.00	120	220	270	203.33	70	110	70	83.33
TKN-N - mg/kg	1097	890	377	788.00	1778	475	180	811.00	1091	969	463	841.00	689	683	485	619.00
Available Phosphorus (Colwell P) - mg/kg	20	21	3	14.67	49	4	3	18.67	65	73	3	47.00	40	6	3	16.33
Emerson Aggregate Class - Class	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
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	2160	2220	2180	2186.67	2560	1728	1414	1900.67	2000	1974	1226	1733.33	838	2200	1770	1602.67
Exchangeable Magnesium - mg/kg	232	279	1007	506.00	281	798	1164	747.67	195	351	742	429.33	138	747	813	566.00
Exchangeable Potassium - mg/kg	181	46.8	67.1	98.30	413	30	30	157.67	160	33.2	147	113.40	162	63.6	30	85.20
Exchangeable Sodium - mg/kg	38.8	71.7	133	81.17	38.2	82.2	237	119.13	12.1	37.7	138	62.60	10.4	30.6	56.1	32.37
Available Nitrate - mg/kg	3	9.6	21.1	11.23	21.2	22.9	17.1	20.40	8.7	30.9	36.7	25.43	10	15.4	12.1	12.50
Total Nitrogen - %	0.11	0.09	0.04	0.08	0.18	0.05	0.02	0.08	0.11	0.1	0.05	0.09	0.07	0.07	0.05	0.06
Cadmium - mg/kg	0.2	0.1	0.2	0.17	0.2	0.2	0.2	0.20	0.1	0.1	0.3	0.17	0.2	0.2	0.2	0.20
Organic Carbon - %	0.9	0.58	0.5	0.66	1.73	0.58	0.47	0.93	0.88	0.64	0.42	0.65	0.74	0.5	0.46	0.57
Total Phosphorus - mg/kg	226	158	62.8	148.93	265	83.8	70.3	139.70	296	190	74	186.67	175	74.7	66.8	105.50
Chromium - mg/kg	91	71	17	59.67	110	20	20	50.00	63	41	20	41.33	18	22	15	18.33
Chromium VI- mg/kg	0.5	0.5	0.5	0.50	2.3	0.5	0.5	1.10	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	10.9	4.7	0.8	5.47	23.5	0.9	0.8	8.40	26.1	2.1	2.5	10.23	29.3	2.6	1.2	11.03
Exchangeable Aluminium - mg/kg	2.7	2.7	2.7	2.70	2.7	2.7	2.7	2.70	2.7	2.9	2.7	2.77	5	3	3	3.67
SAR - SAR Units	0.3	0.4	0.5	0.40	0.3	0.3	0.7	0.43	0.1	0.2	0.8	0.37	0.1	0.1	0.2	0.13
Chloride - mg/kg	19.9	21.5	39.1	26.83	20.8	62.6	70.3	51.23	17.6	19.5	16.9	18.00	24.3	42.3	58.9	41.83
CEC - cmol/kg	13.3	13.6	19.6	15.50	16.3	15.4	17.2	16.30	12.1	12.9	12.9	12.63	5.8	17.4	15.6	12.93
ESP - %of ECEC	0.5	0.8	1.4	0.90	0.4	0.9	3.1	1.47	0.2	0.5	1.9	0.87	0.3	0.3	0.7	0.43

GEELONG LEATHER PTY LTD - CULCAIRN

SOIL ANALYSIS 2015/2016

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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	7.44	8.16	7.16	7.59	7.95	8.43	7.55	7.98
Electrical Conductivity µS/cm	110	190	130	143.33	170	330	250	250.00
TKN-N - mg/kg	1386	673	376	811.67	1088	1542	357	995.67
Available Phosphorus (Colwell P) - mg/kg	74	24	3	33.67	80	86	5	57.00
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	1464	3040	1808	2104.00	1858	2640	1292	1930.00
Exchangeable Magnesium - mg/kg	137	323	603	354.33	102	444	936	494.00
Exchangeable Potassium - mg/kg	376	175	138	229.67	220	75.3	91.3	128.87
Exchangeable Sodium - mg/kg	6.45	21	46.5	24.65	9.03	59	73	47.01
Available Nitrate - mg/kg	13.4	26.5	23.6	21.17	12	57.6	43.1	37.57
Total Nitrogen - %	0.14	0.07	0.04	0.08	0.11	0.16	0.04	0.10
Cadmium - mg/kg	0.1	0.2	0.2	0.17	0.1	0.1	0.2	0.13
Organic Carbon - %	1.16	0.54	0.34	0.68	1	0.72	0.31	0.68
Total Phosphorus - mg/kg	278	119	94.7	163.90	245	254	85.2	194.73
Chromium - mg/kg	19	110	23	50.67	18	160	26	68.00
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	55.4	6.1	0.8	20.77	60.1	2.6	1.4	21.37
Exchangeable Aluminium - mg/kg	2.7	2.7	2.7	2.70	2.7	2.7	2.7	2.70
SAR - SAR Units	0	0.1	0.3	0.13	0	0.3	0.4	0.23
Chloride - mg/kg	18.3	20	18.2	18.83	17.6	22.4	22.2	20.73
CEC - cmol/kg	9.5	18.4	14.5	14.13	10.7	17.2	14.5	14.13
ESP - %of ECEC	0.2	0.3	0.7	0.40	0.2	0.6	0.9	0.57