

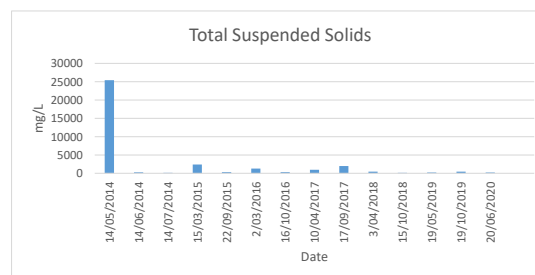
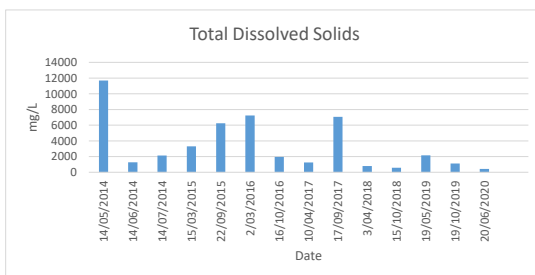
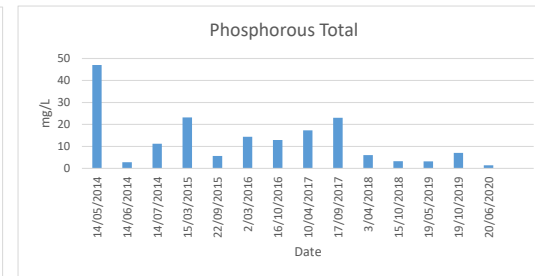
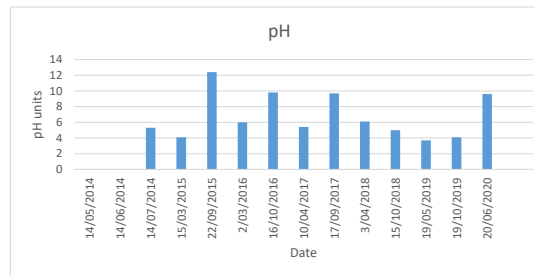
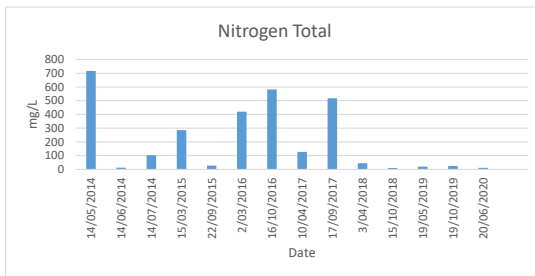
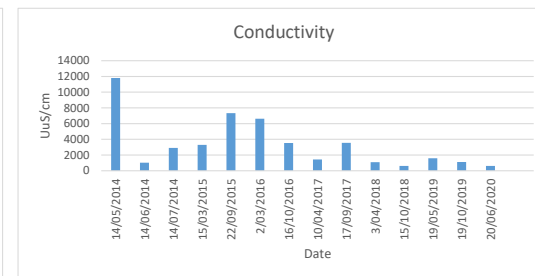
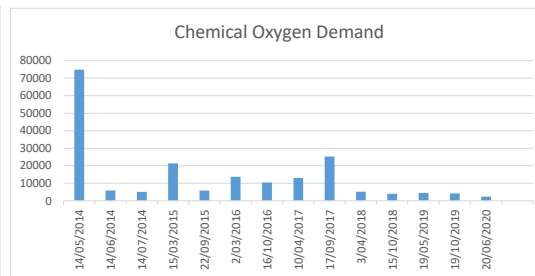
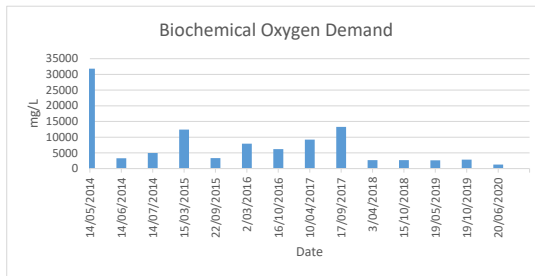
## EPA ENVIRONMENTAL MONITORING

MANDATORY MONITORING																					
EPA Identification point number	Type of Monitoring Point	Type of Discharge Point	How Monitored	Location Description	Detail	Volume	Pollutant								Influent quality Last sampled	Next due	20/12/2020				
							BOD	COD	EC	N (total)	pH	P (total)	SAR	TDS				TSS			
<a href="#">Point 1: Waste Water Treatment Tank. Influent.</a>	Volume monitoring. Influent quality monitoring.	Volume monitoring. Influent quality monitoring.	Volume: flowmeter & cont. logger. Quality: influent sample.	Inflow to WWTT EPA 1 on site map. [1a and 1b]	Test		BOD	COD	EC	N (total)	pH	P (total)	SAR	TDS	TSS						
					unit of measure	kilolitres	mg/L	mg/L	µs/cm	mg/L	pH	mg/L	SAR	mg/L	mg/L						
					frequency	continuous during discharge	every 6 months									20/06/2020					
					sampling method	flow meter & cont. logger	representative sample														
<a href="#">Point 2: Waste Water Treatment. Effluent.</a>	Discharge to utilisation area. Volume monitoring. Effluent quality monitoring.	Discharge to utilisation area. Volume monitoring. Effluent quality monitoring.	Volume: flowmeter. Quality: effluent sample.	Outflow from WWTT - EPA 2 on site map.	Test		BOD	COD	EC	N (total)	pH	P (total)	SAR	TDS	TSS						
					unit of measure	kilolitres	mg/L	mg/L	µs/cm	mg/L	pH	mg/L	SAR	mg/L	mg/L						
					frequency	continuous during discharge	every 6 months									20/06/2020					
					sampling method	flow meter	representative sample														
<a href="#">Point 3: Soil Sample Chardonnay 7</a>	Soil quality monitoring		Soil sample.	Soil control point "EPA 3" on site map.	Test	EC	Exch. Ca	Exch. Mg	Exch. K	Exch. Na	Nitrate	N (total)	pH	P (total)	K	SAR	P sorption capacity				
					unit of measure	µs/cm	mmol(+)/kg	cmol(+)/kg	cmol(+)/kg	cmol(+)/kg	mg/kg	mg/kg	pH	mg/kg	mg/kg	SAR	mg/kg				
					frequency	yearly											spec. freq 1	Soil last sampled	20/09/2020	Next due	20/09/2021
					sampling method	composite sample															
<a href="#">Point 11: Soil Sample Old Chardonnay 5</a>	Soil quality monitoring		Soil sample.	Soil control point "EPA 11" on site map.	Test	EC	Exch. Ca	Exch. Mg	Exch. K	Exch. Na	Nitrate	N (total)	pH	P (total)	K	SAR	sorption capacity				
					unit of measure	µs/cm	mmol(+)/kg	cmol(+)/kg	cmol(+)/kg	cmol(+)/kg	mg/kg	mg/kg	pH	mg/kg	mg/kg	SAR	mg/kg				
					frequency; sampling method	yearly; composite sample											spec. freq 1	Soil last sampled	20/09/2020	Next due	20/09/2021

EPA Identification point number	Type of Monitoring Point	Type of Discharge Point	How Monitored	Location Description	Detail	Standing Water Level	Pollutant																			
							ammonia	Ca	EC	Mg	Nitrate N	N (total)	pH	P (total)	K	Na										
<a href="#">Point 7: Piezometer Red Frontignac Row 1</a>	Groundwater quality monitoring. Standing water level monitoring		Groundwater sample. Groundwater level m'mnt.	Soil control point "EPA 7" on site map.	Test																					
					unit of measure	metres	mg/L	mg/L	µs/cm	mg/L	mg/L	mg/L	pH	mg/L	mg/L	mg/L										
					frequency	every 6 months																				
					sampling method	inspection																				
																				Groundwater Last sampled	20/09/2020	Next due	20/09/2021			
																					Standing depth last completed	16/10/2020	Next due	16/04/2021		
<a href="#">Point 8: Piezometer South End Lined Dam</a>	Groundwater quality monitoring. Standing water level monitoring		Groundwater sample. Groundwater level m'mnt.	Soil control point "EPA 8" on site map.	Test																					
					unit of measure	metres	mg/L	mg/L	µs/cm	mg/L	mg/L	mg/L	pH	mg/L	mg/L	mg/L										
					frequency	every 6 months																				
					sampling method	inspection																				
																					Groundwater Last sampled	20/09/2020	Next due	20/09/2021		
																					Standing depth last completed	16/10/2020	Next due	16/04/2021		
<a href="#">Point 9: Piezometer South West End Row 8 Touriga 13</a>	Groundwater quality monitoring. Standing water level monitoring		Groundwater sample. Groundwater level m'mnt.	Soil control point "EPA 9" on site map.	Test																					
					unit of measure	metres	mg/L	mg/L	µs/cm	mg/L	mg/L	mg/L	pH	mg/L	mg/L	mg/L										
					frequency	every 6 months																				
					sampling method	inspection																				
																					Groundwater Last sampled	20/09/2020	Next due	20/09/2021		
																					Standing depth last completed	16/10/2020	Next due	16/04/2021		
<a href="#">Point 10: Piezometer South West Point F128 dam</a>	Groundwater quality monitoring. Standing water level monitoring		Groundwater sample. Groundwater level m'mnt.	Soil control point "EPA 10" on site map.	Test																					
					unit of measure	metres	mg/L	mg/L	µs/cm	mg/L	mg/L	mg/L	pH	mg/L	mg/L	mg/L										
					frequency	every 6 months																				
					sampling method	inspection																				
																					Groundwater Last sampled	20/09/2020	Next due	20/09/2021		
																					Standing depth last update	16/10/2020	Next due	16/04/2021		
<a href="#">Point 13: Piezometer West End Old Chardonnay 6</a>	Groundwater quality monitoring. Standing water level monitoring		Groundwater sample. Groundwater level m'mnt.	Soil control point "EPA 13" on site map.	Test																					
					unit of measure	metres	mg/L	mg/L	µs/cm	mg/L	mg/L	mg/L	pH	mg/L	mg/L	mg/L										
					frequency	every 6 months																				
					sampling method	inspection																				
																					Groundwater Last sampled	20/09/2020	Next due	20/09/2021		
																					Standing depth last completed	16/10/2020	Next due	16/04/2021		

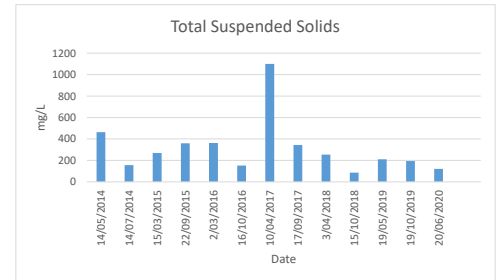
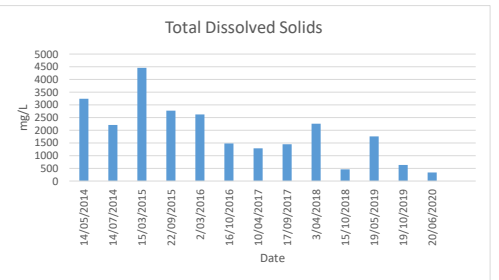
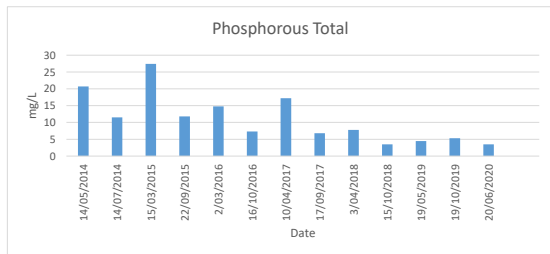
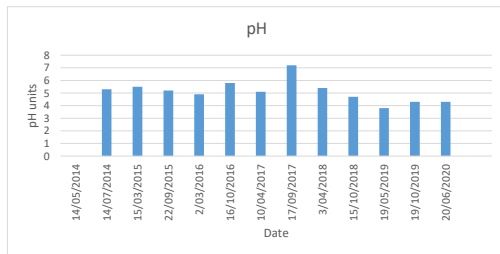
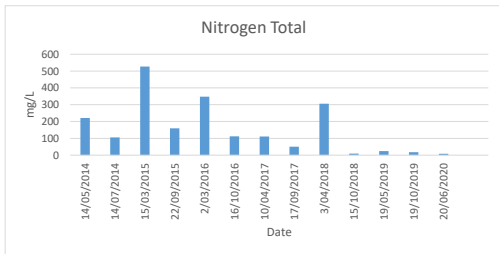
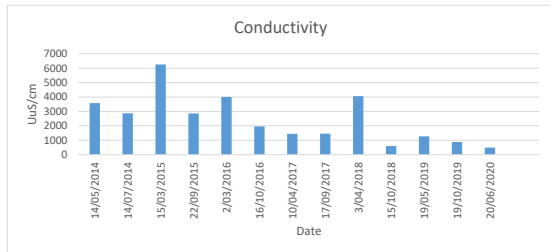
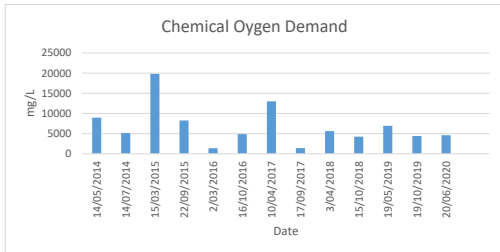
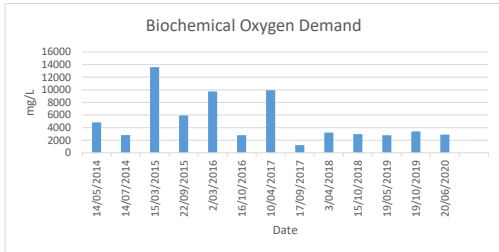
**Point 1: Influent Quality Monitoring**

Date Sampled				14/05/2014	14/06/2014	14/07/2014	15/03/2015	22/09/2015	2/03/2016	16/10/2016	10/04/2017	17/09/2017	3/04/2018	15/10/2018	19/05/2019	19/10/2019	20/06/2020
Date results obtained																	3/08/2020
Type of Test	Name of Test	Test	Units														
Quality monitoring	Biological oxygen demand	BOD	mg/L	31800	3260	4950	12400	3320	7920	6190	9210	13300	2680	2710	2650	2870	1290
Quality monitoring	Chemical oxygen demand	COD	mg/L	74900	5820	5060	21400	5850	13700	10400	13000	25200	5130	4020	4490	4220	2320
Quality monitoring	Electrical conductivity	EC	µs/cm	11800	1020	2900	3290	7330	6610	3540	1450	3560	1100	612	1600	1110	615
Quality monitoring	Nitrogen	N (total)	mg/L	717	13	103	286	27	420	582	127	518	45	10	20	25	11
Quality monitoring	pH	pH	n/a	n/a	5.3	4.1	12.4	6	9.8	5.4	9.7	6.1	5	3.7	4.1	9.6	
Quality monitoring	Phosphorus	P (total)	mg/L	47	2.8	11.2	23.2	5.69	14.4	12.9	17.3	23	6.02	3.26	3.16	7.03	1.39
Quality monitoring	Sodium absorption ratio	SAR	SAR	<1	2	2	1	2	2	3	2	1	1	2	1	1	9
Quality monitoring	Total dissolved solids	TDS	mg/L	11700	1280	2140	3310	6250	7240	1960	1240	7070	788	576	2160	1120	418
Quality monitoring	Total suspended solids	TSS	mg/L	25400	254	144	2410	322	1310	312	945	1980	458	110	243	476	215



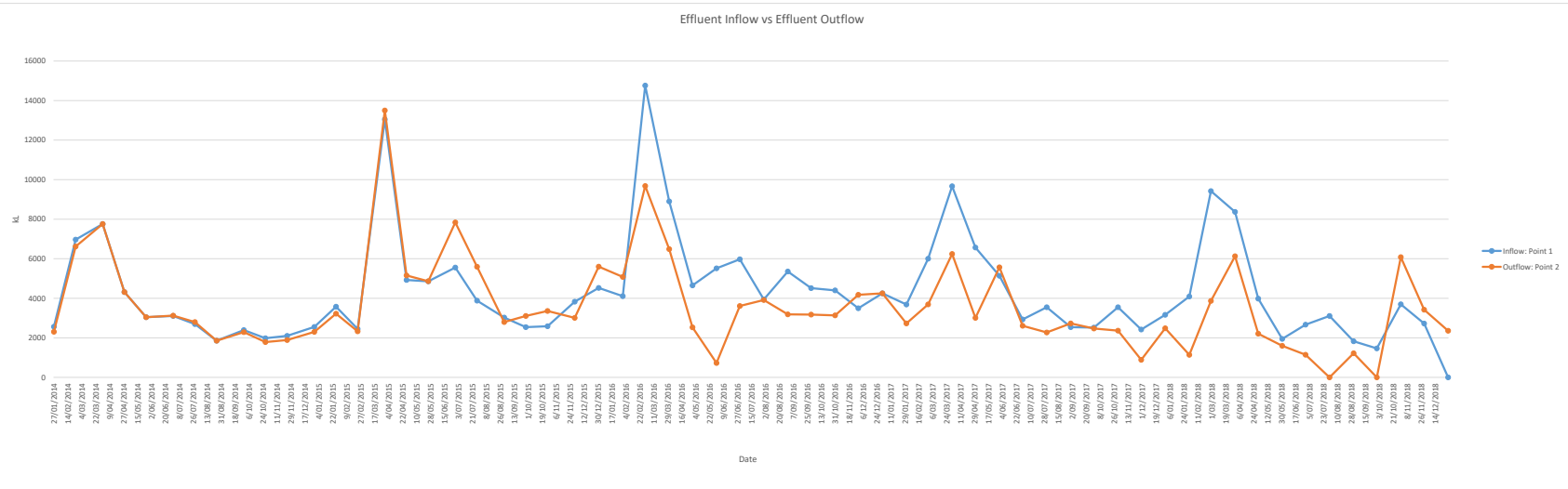
**Point 2: Effluent Quality Monitoring**

Date Sampled				14/05/2014	14/07/2014	15/03/2015	22/09/2015	2/03/2016	16/10/2016	10/04/2017	17/09/2017	3/04/2018	15/10/2018	19/05/2019	19/10/2019	20/06/2020
Date results obtained																8/08/2020
Type of Test	Name of Test	Test	Units													
Quality monitoring	Biological oxygen demand	BOD	mg/L	4830	2820	13600	5920	9730	2800	9930	1220	3220	2970	2800	3380	2880
Quality monitoring	Chemical oxygen demand	COD	mg/L	8940	5160	19800	8260	1350	4860	13000	1410	5620	4250	6950	4400	4600
Quality monitoring	Electrical conductivity	EC	µs/cm	3580	2870	6260	2860	4010	1960	1450	1460	4060	600	1280	884	493
Quality monitoring	Nitrogen	N (total)	mg/L	221	105	527	159	348	112	111	50	306	9	24	18	8
Quality monitoring	pH	pH	pH		5.3	5.5	5.2	4.9	5.8	5.1	7.2	5.4	4.7	3.8	4.3	4.3
Quality monitoring	Phosphorus	P (total)	mg/L	20.7	11.5	27.4	11.8	14.8	7.33	17.2	6.79	7.79	3.47	4.49	5.3	3.49
Quality monitoring	Sodium absorption ratio	SAR	SAR	1	2	1	1	2	6	2	4	1	1	1	1	
Quality monitoring	Total dissolved solids	TDS	mg/L	3240	2210	4460	2770	2620	1480	1290	1450	2260	458	1760	632	337
Quality monitoring	Total suspended solids	TSS	mg/L	464	156	269	360	363	152	1100	343	255	86	211	195	121



**Influent (inflow) vs Effluent**

Date	Inflow: Point 1	Outflow: Point 2
27/01/2014	2566	2309
24/02/2014	6970	6622
31/03/2014	7760	7760
28/04/2014	4315	4316
26/05/2014	3043	3044
30/06/2014	3110	3122
28/07/2014	2698	2798
25/08/2014	1854	1854
29/09/2014	2391	2290
27/10/2014	1979	1787
24/11/2014	2100	1890
23/12/2014	2354	2300
16/01/2015	3578	3220
23/02/2015	2451	2330
30/03/2015	13047	13503
27/04/2015	4927	5155
25/05/2015	4858	4865
29/06/2015	5558	7839
27/07/2015	3882	5593
31/08/2015	3027	2800
28/09/2015	2543	3110
26/10/2015	2584	3360
30/11/2015	3826	3010
31/12/2015	4524	5600
31/01/2016	4110	5080
29/02/2016	14760	9680
31/03/2016	8900	6490
30/04/2016	4651	2530
31/05/2016	5515	730
30/06/2016	5971	3610
31/07/2016	3942	3914
31/08/2016	5354	3190
30/09/2016	4515	3174
31/10/2016	4398	3135
30/11/2016	3497	4176
31/12/2016	4249	4253
31/01/2017	3685	2728
28/02/2017	6000	3692
31/03/2017	9669	6242
30/04/2017	6570	3010
31/05/2017	5140	5567
30/06/2017	2932	2610
31/07/2017	3546	2270
31/08/2017	2543	2730
30/09/2017	2518	2472
31/10/2017	3546	2364
30/11/2017	2422	886
31/12/2017	3165	2484
31/01/2018	4089	1141
28/02/2018	9422	3867
31/03/2018	8370	6126
30/04/2018	3984	2207
31/05/2018	1944	1595
30/06/2018	2669	1146
31/07/2018	3107	0
31/08/2018	1827	1219
30/09/2018	1465	0
31/10/2018	3696	6080
30/11/2018	2724	3421
31/12/2018	0	2357

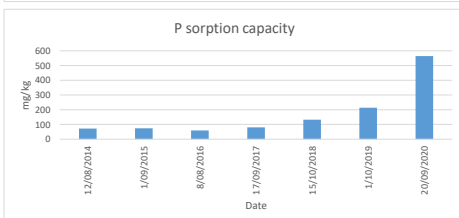
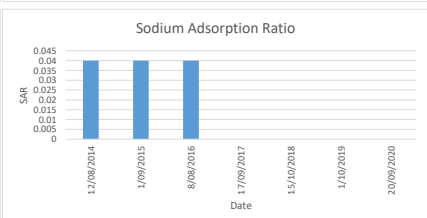
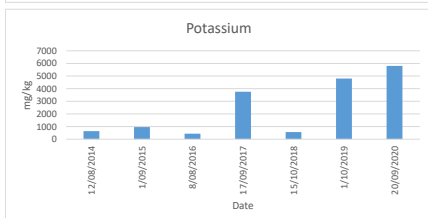
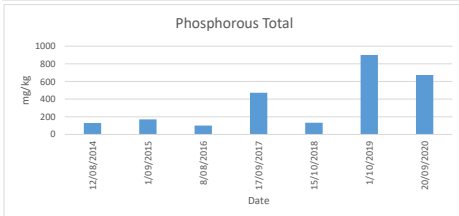
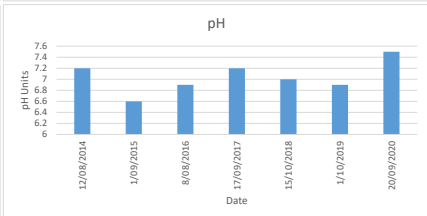
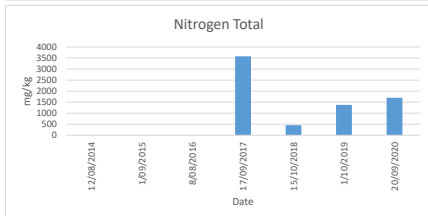
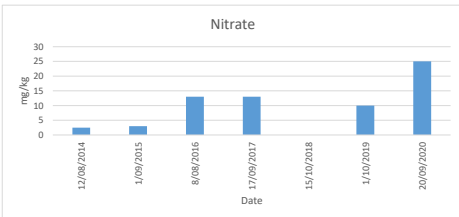
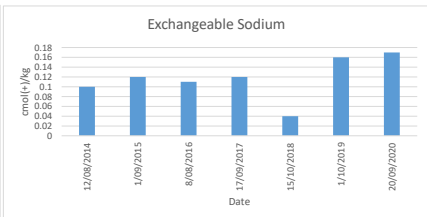
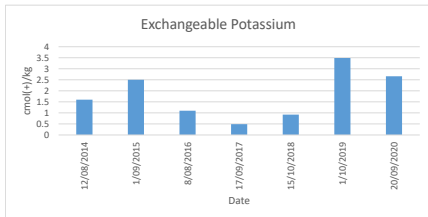
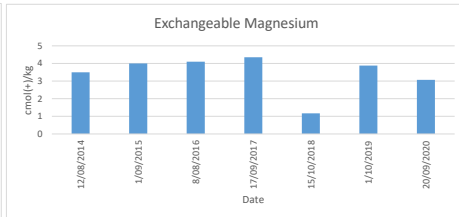
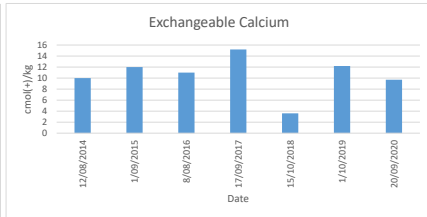
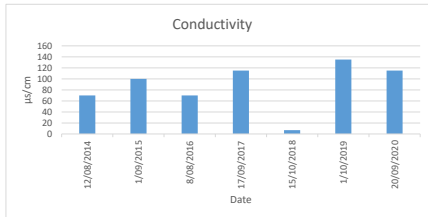


went to winter storage

had to pump out of winter storage

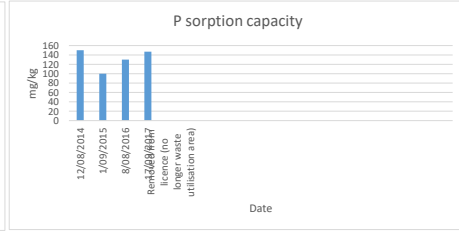
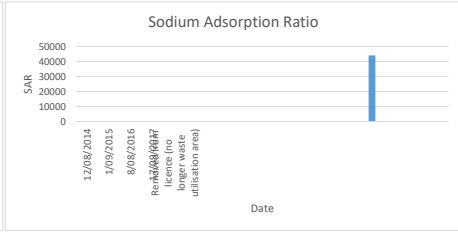
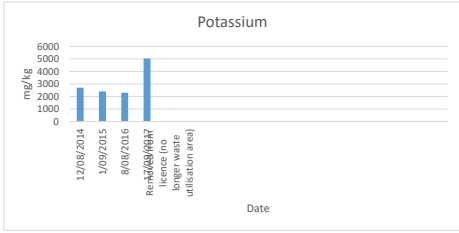
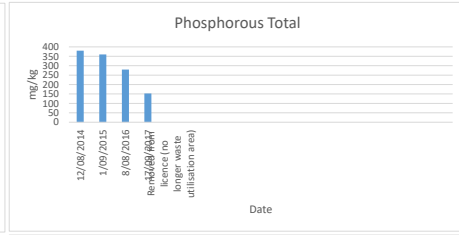
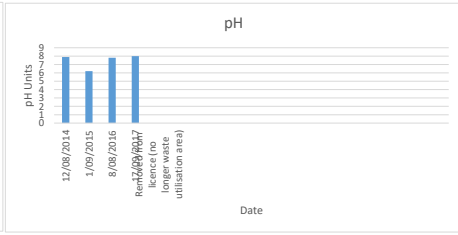
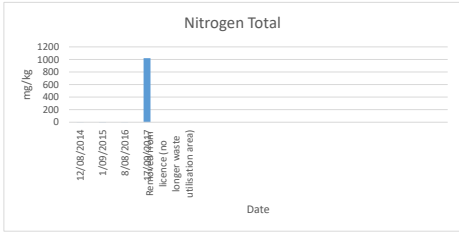
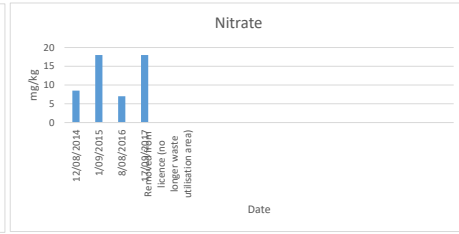
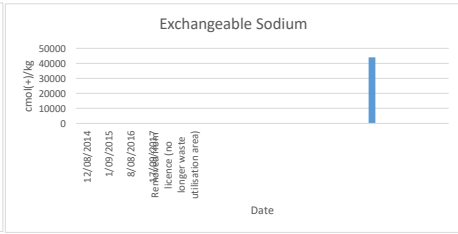
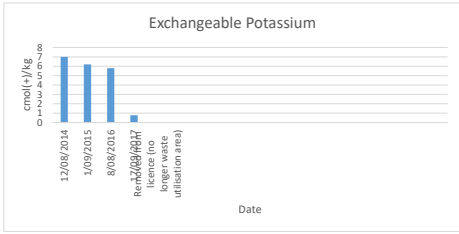
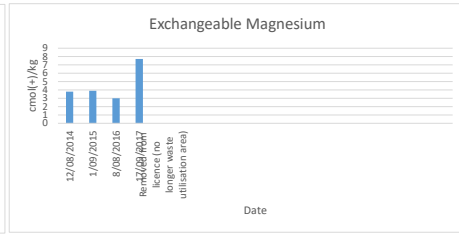
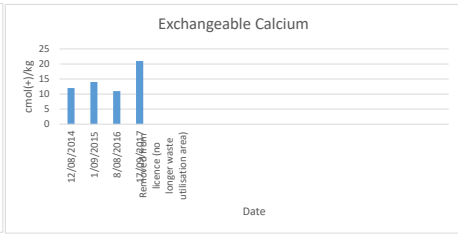
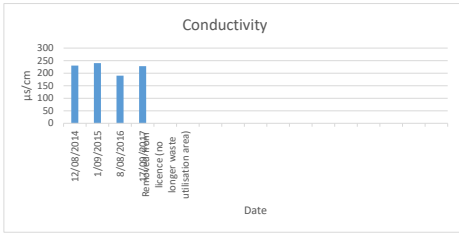
**Point 3: Soil Test Results Chardonnay 7**

Date Sampled				12/08/2014	1/09/2015	8/08/2016	17/09/2017	15/10/2018	1/10/2019	20/09/2020										
Date results obtained									14/11/2019	20/10/2020										
Type of Test	Name of Test	Test	Units																	
Quality monitoring	Electrical conductivity	EC	µs/cm	70	100	70	115	7	135	115										
Quality monitoring	Exchangeable calcium	Exch. Ca	cmol(+)/kg	10	12	11	15.2	3.6	12.2	9.7										
Quality monitoring	Exchangeable magnesium	Exch. Mg	cmol(+)/kg	3.5	4	4.1	4.35	1.17	3.88	3.07										
Quality monitoring	Exchangeable potassium	Exch. K	cmol(+)/kg	1.6	2.5	1.1	0.49	0.92	3.49	2.66										
Quality monitoring	Exchangeable sodium	Exch. Na	cmol(+)/kg	0.1	0.12	0.11	0.12	0.04	0.16	0.17										
Quality monitoring	Nitrate nitrogen	Nitrate	mg/kg	2.5	3	33	13	5	10	25										
Quality monitoring	Total nitrogen	N (total)	mg/kg	1	2	1	3580	458	1380	1700										
Quality monitoring	pH	pH	pH	7.2	6.6	6.9	7.2	7	6.9	7.5										
Quality monitoring	Total phosphorus	P (total)	mg/kg	130	170	100	472	132	900	673										
Quality monitoring	Potassium	K	mg/kg	640	960	440	3760	563	4800	5800										
Quality monitoring	Sodium adsorption ratio	SAR	SAR	0.04	0.04	0.04	<1	<1	<1	<1										
Quality monitoring	P sorption capacity	P sorption capacity	mg/kg	72	74	59	80	132	214	564										



**Point 4: Soil Test Results Canada Muscat 11**

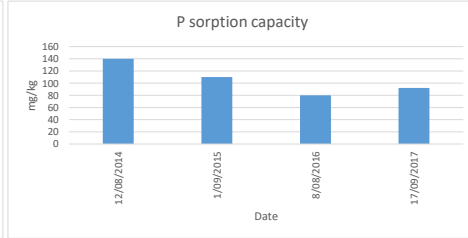
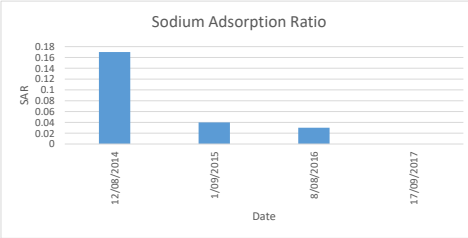
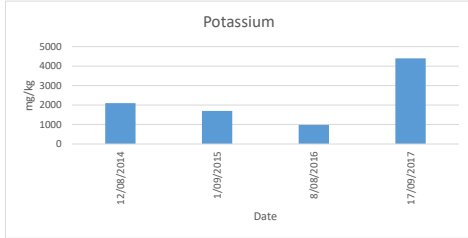
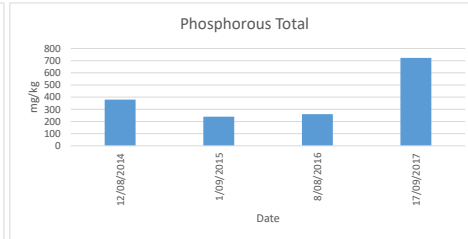
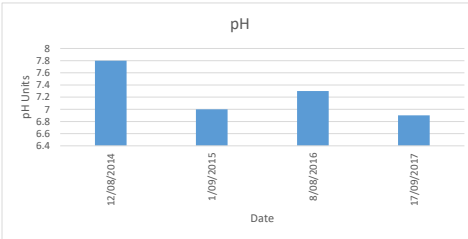
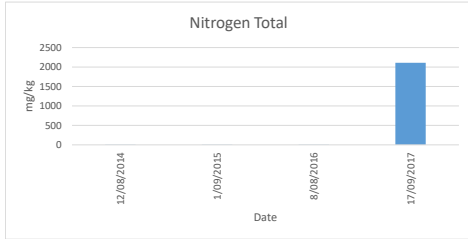
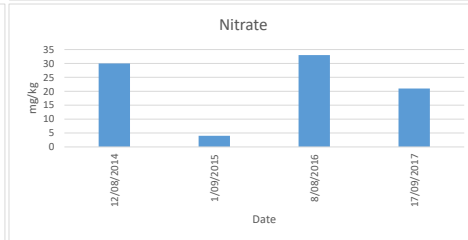
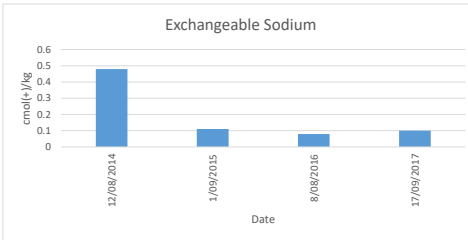
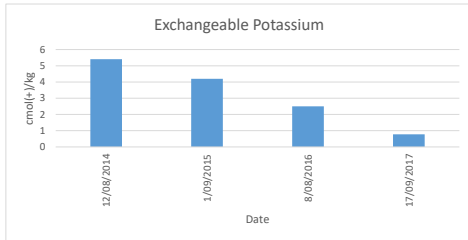
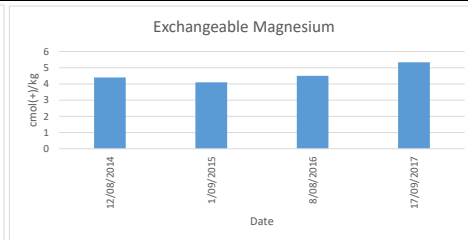
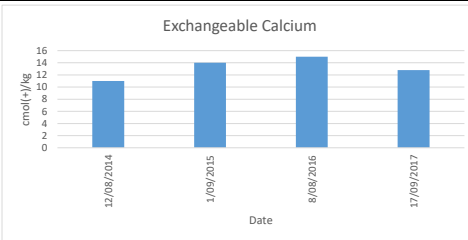
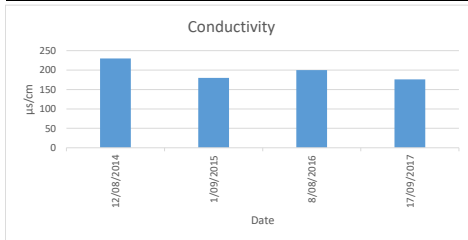
Type of Test	Name of Test	Test	Units	Date				Removed from licence (no longer waste utilisation area)												
				12/08/2014	1/09/2015	8/08/2016	17/09/2017													
Quality monitoring	Electrical conductivity	EC	µs/cm	230	240	190	228													
Quality monitoring	Exchangeable calcium	Exch. Ca	cmol(+)/kg	12	14	11	21													
Quality monitoring	Exchangeable magnesium	Exch. Mg	cmol(+)/kg	3.8	3.9	3	7.72													
Quality monitoring	Exchangeable potassium	Exch. K	cmol(+)/kg	7	6.2	5.8	0.78													
Quality monitoring	Exchangeable sodium	Exch. Na	cmol(+)/kg	1.3	0.31	0.48	1.05													
Quality monitoring	Nitrate nitrogen	Nitrate	mg/kg	8.5	18	7	18													#####
Quality monitoring	Total nitrogen	N (total)	mg/kg	1.5	4	2	1020													
Quality monitoring	pH	pH	pH	7.9	6.2	7.8	8													
Quality monitoring	Total phosphorus	P (total)	mg/kg	380	360	280	153													
Quality monitoring	Potassium	K	mg/kg	2700	2400	2300	5040													
Quality monitoring	Sodium absorption ratio	SAR	SAR	0.46	0.1	0.18	1													#####
Quality monitoring	P sorption capacity	P sorption capacity	mg/kg	150	100	130	147													



**Point 5: Soil Test Results Red Frontignac 12**

Date

Type of Test	Name of Test	Test	Units	12/08/2014	1/09/2015	8/08/2016	17/09/2017											
Quality monitoring	Electrical conductivity	EC	µs/cm	230	180	200	176	Removed from Licence (no longer waste utilisation area)										
Quality monitoring	Exchangeable calcium	Exch. Ca	cmol(+)/kg	11	14	15	12.8											
Quality monitoring	Exchangeable magnesium	Exch. Mg	cmol(+)/kg	4.4	4.1	4.5	5.34											
Quality monitoring	Exchangeable potassium	Exch. K	cmol(+)/kg	5.4	4.2	2.5	0.78											
Quality monitoring	Exchangeable sodium	Exch. Na	cmol(+)/kg	0.48	0.11	0.08	0.1											
Quality monitoring	Nitrate nitrogen	Nitrate	mg/kg	30	4	33	21											
Quality monitoring	Total nitrogen	N (total)	mg/kg	1.9	3	3	2110											
Quality monitoring	pH	pH		7.8	7	7.3	6.9											
Quality monitoring	Total phosphorus	P (total)	mg/kg	380	240	260	722											
Quality monitoring	Potassium	K	mg/kg	2100	1700	980	4400											
Quality monitoring	Sodium adsorption ratio	SAR		0.17	0.04	0.03	<1											
Quality monitoring	P sorption capacity	P sorption capacity	mg/kg	140	110	80	92											

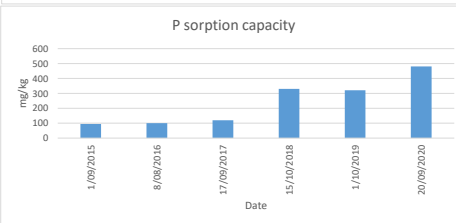
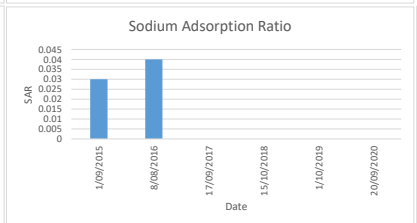
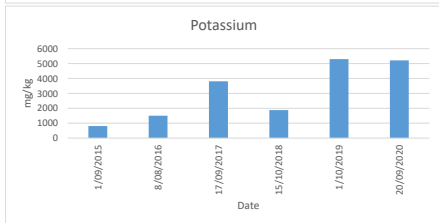
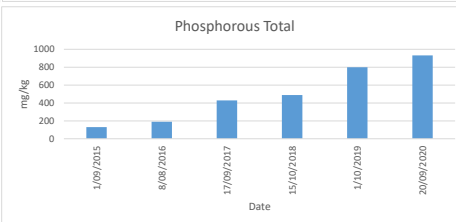
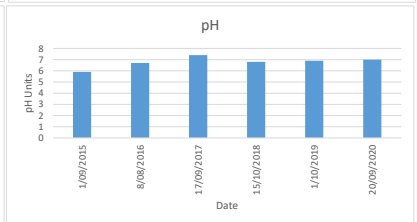
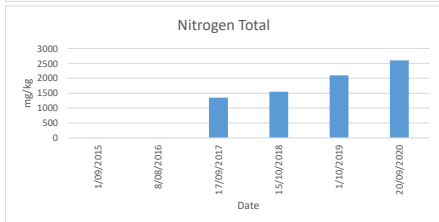
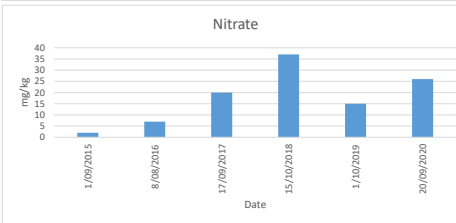
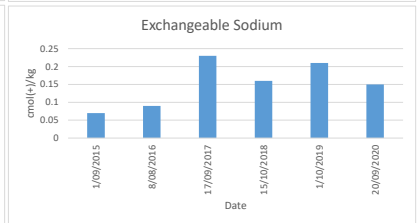
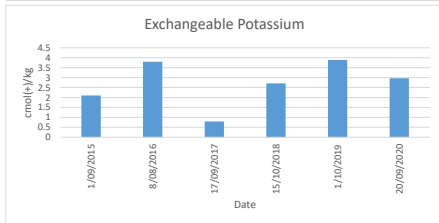
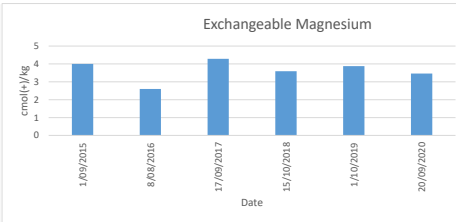
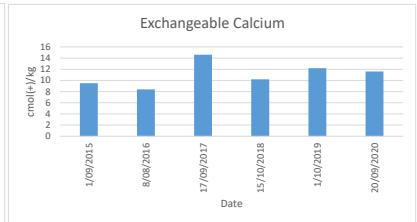
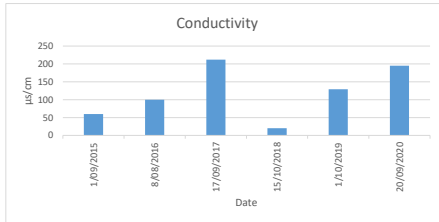




**Point 11: Soil Test Results Old Chardonnay 5**

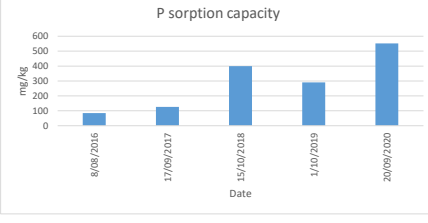
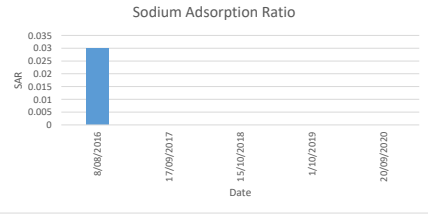
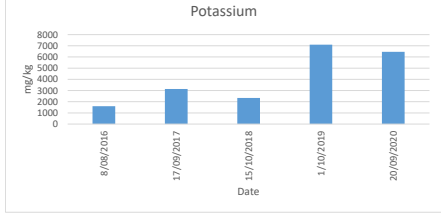
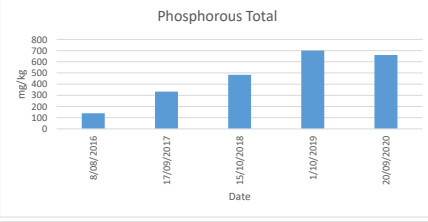
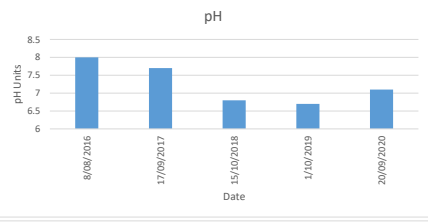
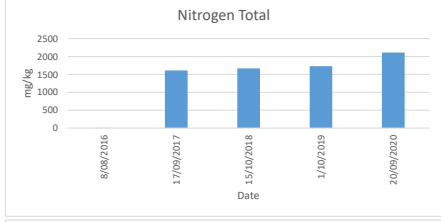
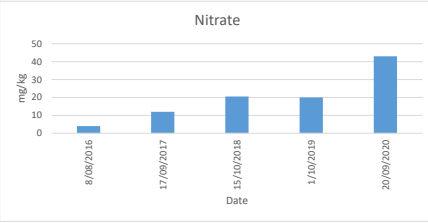
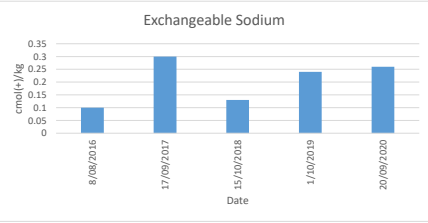
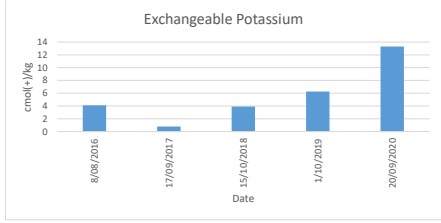
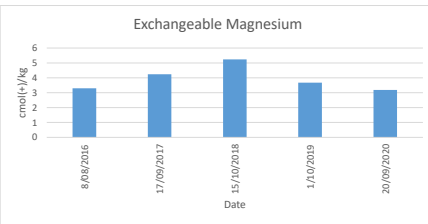
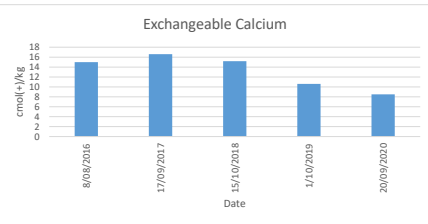
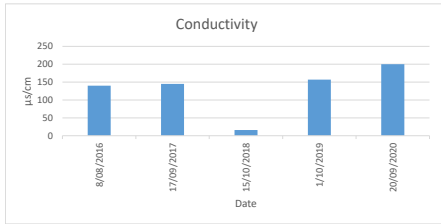
Date

Date Sampled				1/09/2015	8/08/2016	17/09/2017	15/10/2018	1/10/2019	20/09/2020											
Date results obtained								14/11/2019	20/10/2020											
Type of Test	Name of Test	Test	Units																	
Quality monitoring	Electrical conductivity	EC	µs/cm	60	100	212	20	129	195											
Quality monitoring	Exchangeable calcium	Exch. Ca	cmol(+)/kg	9.5	8.4	14.6	10.2	12.2	11.6											
Quality monitoring	Exchangeable magnesium	Exch. Mg	cmol(+)/kg	4	2.6	4.29	3.59	3.88	3.46											
Quality monitoring	Exchangeable potassium	Exch. K	cmol(+)/kg	2.1	3.8	0.79	2.71	3.89	2.97											
Quality monitoring	Exchangeable sodium	Exch. Na	cmol(+)/kg	0.07	0.09	0.23	0.16	0.21	0.15											
Quality monitoring	Nitrate nitrogen	Nitrate	mg/kg	2	7	20	37	15	26											
Quality monitoring	Total nitrogen	N (total)	mg/kg	2	5	1350	1550	2100	2600											
Quality monitoring	pH	pH	pH	5.9	6.7	7.4	6.8	6.9	7											
Quality monitoring	Total phosphorus	P (total)	mg/kg	130	190	428	488	800	931											
Quality monitoring	Potassium	K	mg/kg	810	1500	3810	1880	5300	5210											
Quality monitoring	Sodium adsorption ratio	SAR		0.03	0.04	<1	<1	<1	<1											
Quality monitoring	P sorption capacity	P sorption capacity	mg/kg	95	100	120	330	321	481											



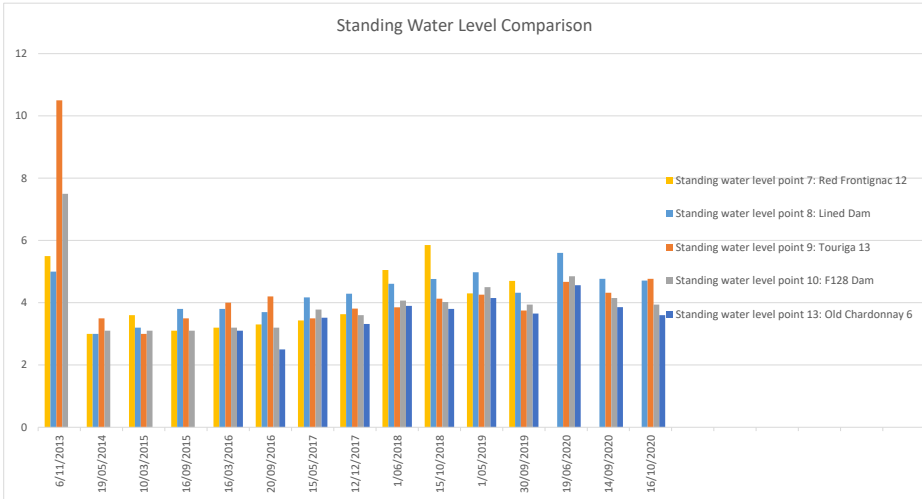
**Point 12: Soil Test Results Old Chardonnay 6**

Date Sampled				8/08/2016	17/09/2017	15/10/2018	1/10/2019	20/09/2020												
Date results obtained																				
Type of Test	Name of Test	Test	Units																	
Quality monitoring	Electrical conductivity	EC	µs/cm	140	145	16	157	200												
Quality monitoring	Exchangeable calcium	Exch. Ca	cmol(+)/kg	15	16.6	15.2	10.6	8.5												
Quality monitoring	Exchangeable magnesium	Exch. Mg	cmol(+)/kg	3.3	4.24	5.24	3.68	3.19												
Quality monitoring	Exchangeable potassium	Exch. K	cmol(+)/kg	4.1	0.78	3.91	6.27	13.3												
Quality monitoring	Exchangeable sodium	Exch. Na	cmol(+)/kg	0.1	0.3	0.13	0.24	0.26												
Quality monitoring	Nitrate nitrogen	Nitrate	mg/kg	4	12	20.5	20	43												
Quality monitoring	Total nitrogen	N (total)	mg/kg	2	1610	1670	1730	2110												
Quality monitoring	pH	pH	pH	8	7.7	6.8	6.7	7.1												
Quality monitoring	Total phosphorus	P (total)	mg/kg	140	333	483	700	661												
Quality monitoring	Potassium	K	mg/kg	1600	3140	2340	7100	6460												
Quality monitoring	Sodium absorption ratio	SAR	SAR	0.03	<1	<1	<1	<1												
Quality monitoring	P sorption capacity	P sorption capacity	mg/kg	85	126	400	291	552												



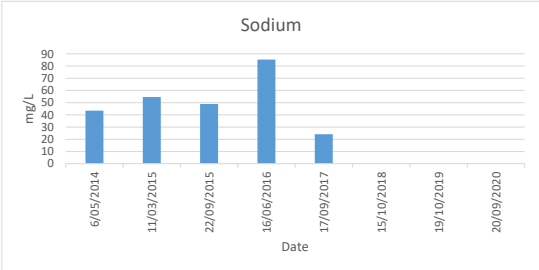
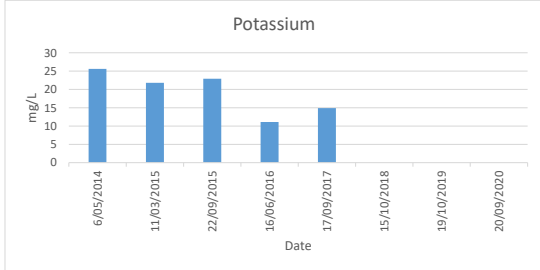
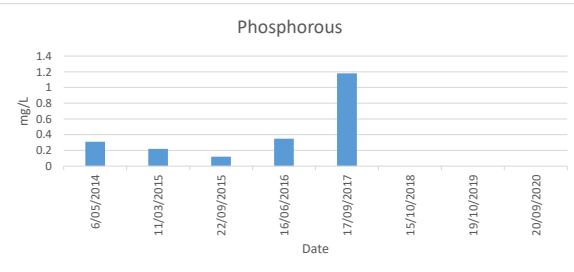
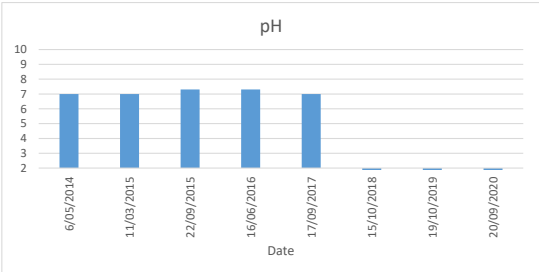
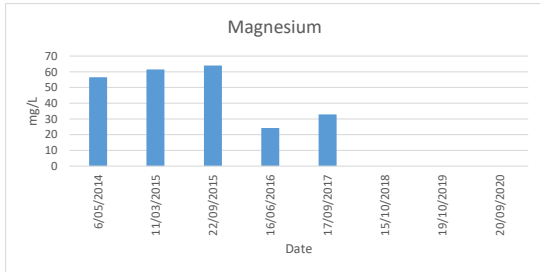
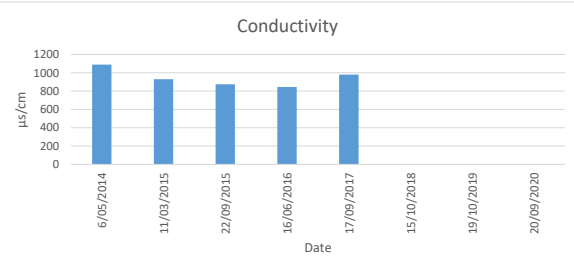
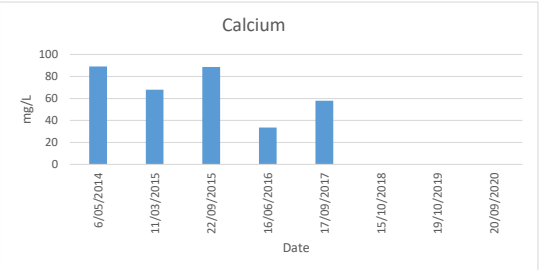
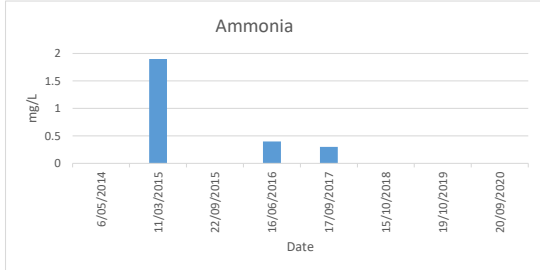
**Piezometer Standing Water Levels: depth in metres below surface**

Date	Standing water level point 7: Red Frontignac 12	Standing water level point 8: Lined Dam	Standing water level point 9: Touriga 13	Standing water level point 10: F128 Dam	Standing water level point 13: Old Chardonnay 6	comments
6/11/2013	5.5	5	10.5	7.5		
19/05/2014	3	3	3.5	3.1		
10/03/2015	3.6	3.2	3	3.1		
16/09/2015	3.1	3.8	3.5	3.1		
16/03/2016	3.2	3.8	4	3.2	3.1	
20/09/2016	3.3	3.7	4.2	3.2	2.5	
15/05/2017	3.43	4.17	3.5	3.78	3.52	
12/12/2017	3.63	4.29	3.81	3.6	3.32	
1/06/2018	5.05	4.61	3.85	4.07	3.9	
15/10/2018	5.85	4.76	4.13	4.02	3.8	
1/05/2019	4.3	4.98	4.26	4.5	4.15	
30/09/2019	4.7	4.32	3.75	3.94	3.65	
19/06/2020	n/a	5.6	4.67	4.85	4.56	no water in point 7 or point 8
14/09/2020	n/a	4.77	4.32	4.15	3.86	no water in point 7 water low and dirty point 8
16/10/2020	n/a	4.71	4.77	3.94	3.6	no water in point 7



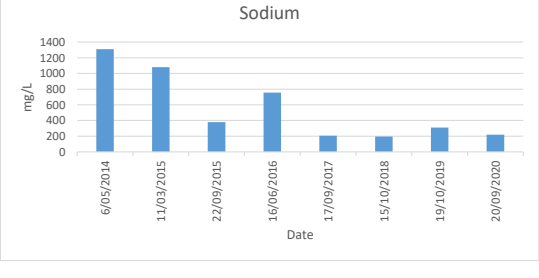
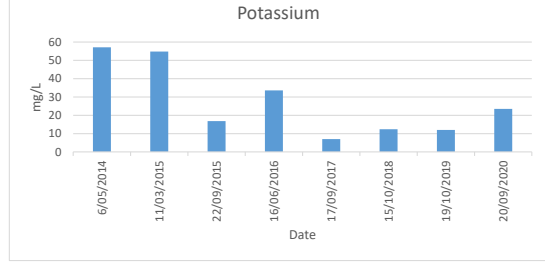
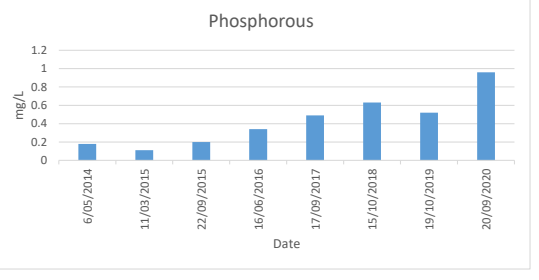
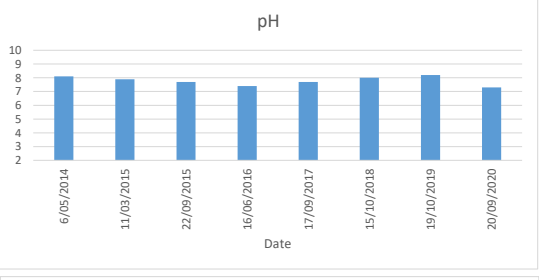
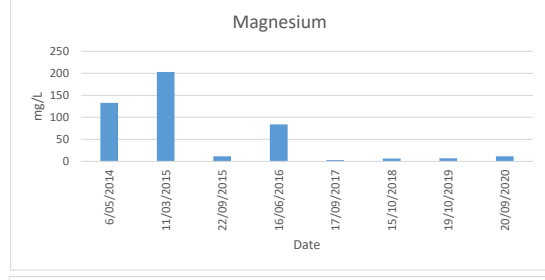
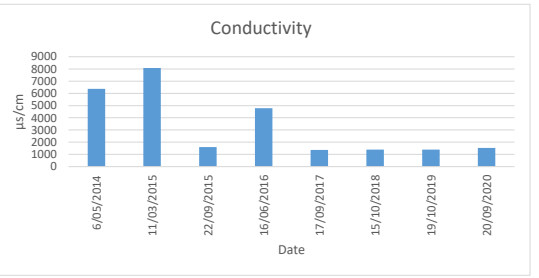
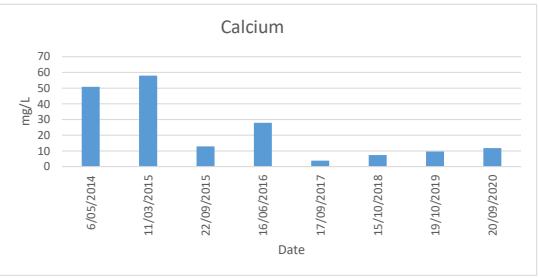
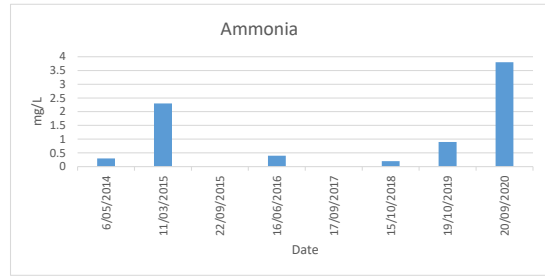
**Point 7: Piezometer Water Quality Test Results Red Frontignac 12 Row 1**

				Date															
Date Sampled				6/05/2014	11/03/2015	22/09/2015	16/06/2016	17/09/2017	15/10/2018	19/10/2019	20/09/2020								
Date results obtained																			
Type of Test	Name of Test	Test	Units																
Quality monitoring	Ammonium nitrogen	ammonia	mg/L	<0.2	1.9	<0.2	0.4	0.3	n/a	n/a	n/a								
Quality monitoring	Calcium	Ca	mg/L	89.1	67.9	88.6	33.5	57.9	n/a	n/a	n/a								
Quality monitoring	Electrical conductivity	EC	µs/cm	1090	931	874	845	980	n/a	n/a	n/a								
Quality monitoring	Magnesium	Mg	mg/L	56.5	61.5	64	24.3	32.9	n/a	n/a	n/a								
Quality monitoring	Nitrate nitrogen	N( nitrate)	mg/L	<0.5	<1	<0.5	<0.1	4.4	n/a	n/a	n/a								
Quality monitoring	Total nitrogen	N(total)	mg/L	2	<2	2	2	6	n/a	n/a	n/a								
Quality monitoring	pH	pH		7	7	7.3	7.3	7	n/a	n/a	n/a								
Quality monitoring	Phosphorus	P	mg/L	0.31	0.22	0.12	0.35	1.18	n/a	n/a	n/a								
Quality monitoring	Potassium	K	mg/L	25.6	21.8	22.9	11.1	14.9	n/a	n/a	n/a								
Quality monitoring	Sodium	Na	mg/L	43.4	54.6	48.9	85.2	24.1	n/a	n/a	n/a								



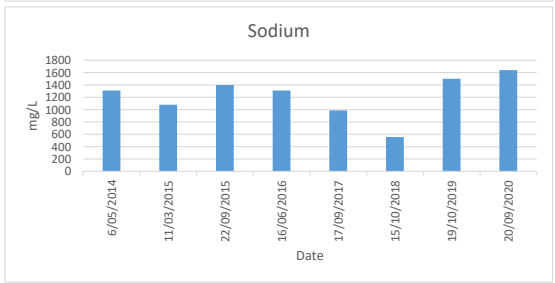
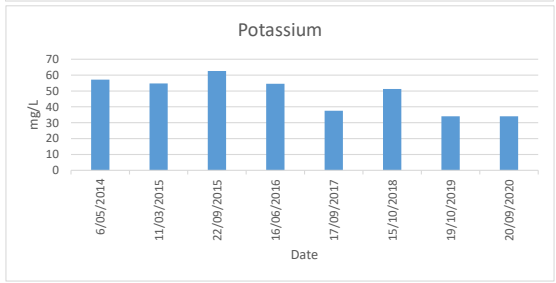
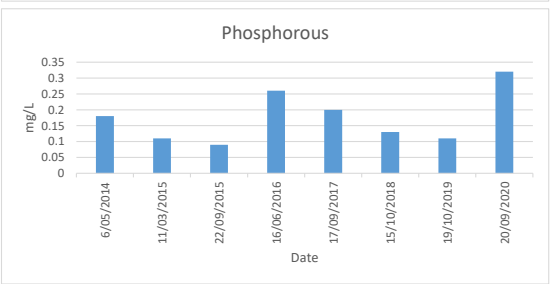
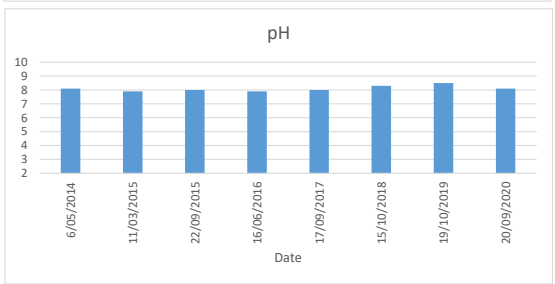
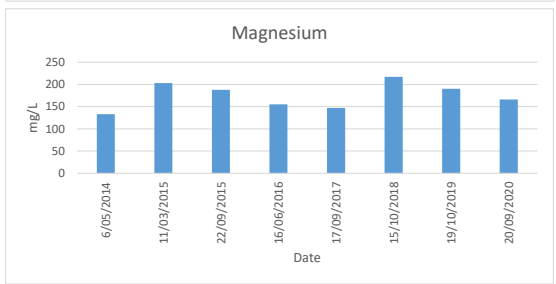
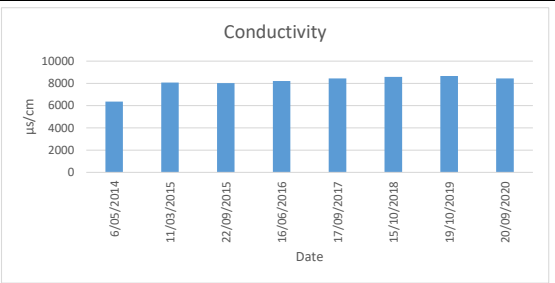
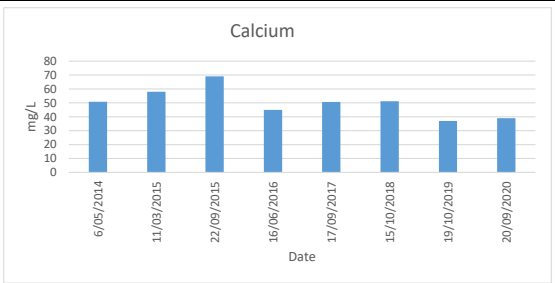
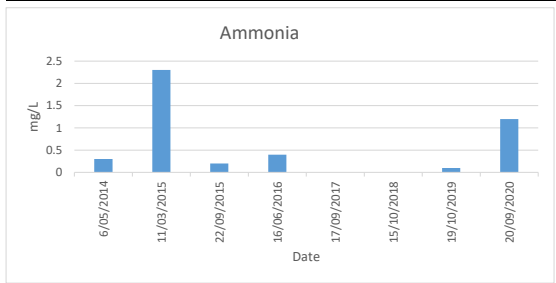
**Point 8: Piezometer Water Quality Test Results Lined Dam SW End**

Date Sampled				6/05/2014	11/03/2015	22/09/2015	16/06/2016	17/09/2017	15/10/2018	19/10/2019	20/09/2020									
Date results obtained										14/11/2019	19/10/2020									
Type of Test	Name of Test	Test	Units																	
Quality monitoring	Ammonium nitrogen	ammonia	mg/L	0.3	2.3	<0.2	0.4	<0.1	0.2	0.9	3.8									
Quality monitoring	Calcium	Ca	mg/L	50.8	58	12.9	27.9	3.81	7.37	9.6	11.8									
Quality monitoring	Electrical conductivity	EC	µs/cm	6370	8080	1600	4790	1360	1390	1400	1530									
Quality monitoring	Magnesium	Mg	mg/L	133	203	11.4	84	2.85	6.43	6.7	11.5									
Quality monitoring	Nitrate nitrogen	N( nitrate)	mg/L	<0.5	<1.0	<0.5	1.1	<0.1	0.2	<1										
Quality monitoring	Total nitrogen	N(total)	mg/L	2	<2	2	3	2	5	52	24									
Quality monitoring	pH	pH	pH	8.1	7.9	7.7	7.4	7.7	8	8.2	7.3									
Quality monitoring	Phosphorus	P	mg/L	0.18	0.11	0.2	0.34	0.49	0.63	0.52	0.96									
Quality monitoring	Potassium	K	mg/L	57.1	54.8	16.8	33.6	7	12.4	12	23.5									
Quality monitoring	Sodium	Na	mg/L	1310	1080	380	756	206	196	310	219									



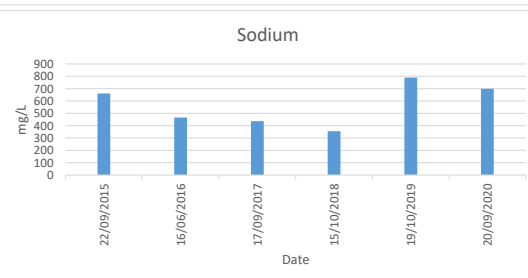
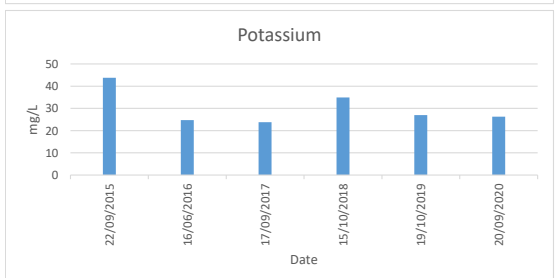
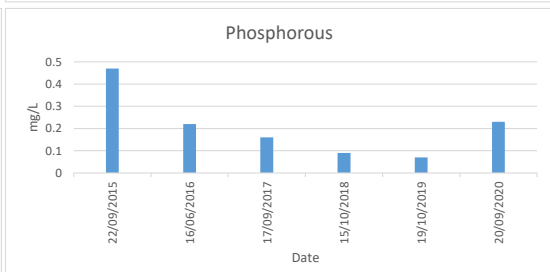
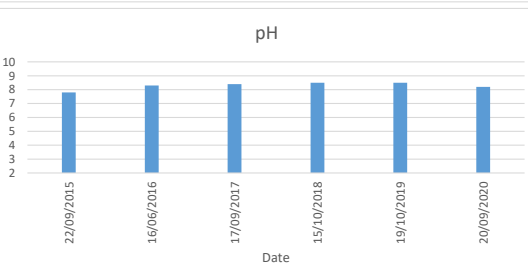
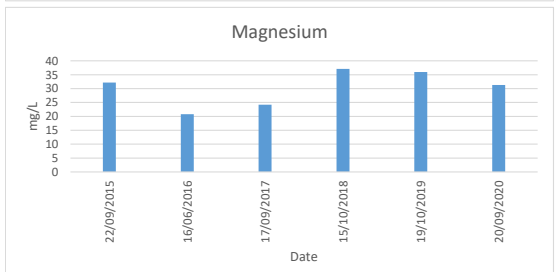
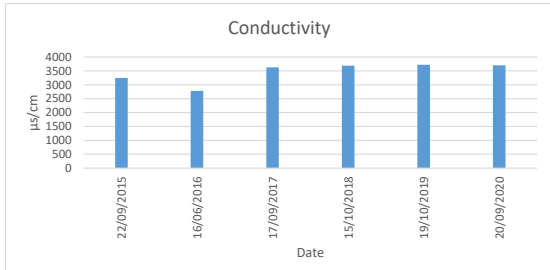
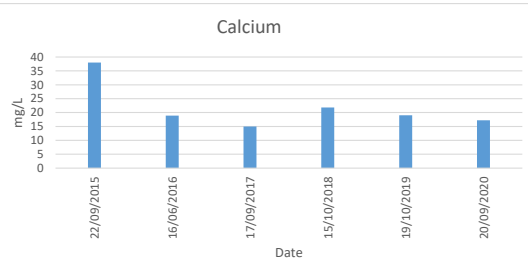
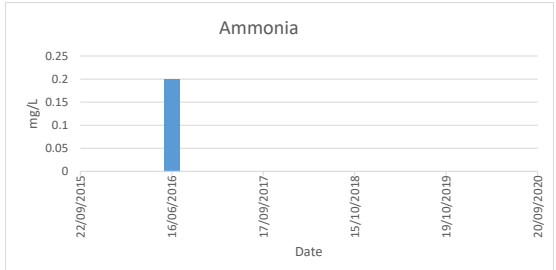
**Point 9: Piezometer Water Quality Test Results Touriga SW End**

Date Sampled				6/05/2014	11/03/2015	22/09/2015	16/06/2016	17/09/2017	15/10/2018	19/10/2019	20/09/2020									
Date results obtained										14/11/2019	19/10/2020									
Type of Test	Name of Test	Test	Units																	
Quality monitoring	Ammonium nitrogen	ammonia	mg/L	0.3	2.3	0.2	0.4	<0.1	<0.1	0.1	1.2									
Quality monitoring	Calcium	Ca	mg/L	50.8	58	69	44.9	50.7	51.2	37	39									
Quality monitoring	Electrical conductivity	EC	µs/cm	6370	8080	8030	8210	8450	8580	8670	8440									
Quality monitoring	Magnesium	Mg	mg/L	133	203	188	155	147	217	190	166									
Quality monitoring	Nitrate nitrogen	N( nitrate)	mg/L	<0.5	<1	<0.5	<0.1	2.4	1.3	1	<1									
Quality monitoring	Total nitrogen	N(total)	mg/L	2	<2	<2	2	2	<2	<2	<2									
Quality monitoring	pH	pH		8.1	7.9	8	7.9	8	8.3	8.5	8.1									
Quality monitoring	Phosphorus	P	mg/L	0.18	0.11	0.09	0.26	0.2	0.13	0.11	0.32									
Quality monitoring	Potassium	K	mg/L	57.1	54.8	62.6	54.5	37.5	51.3	34	34.1									
Quality monitoring	Sodium	Na	mg/L	1310	1080	1400	1310	987	557	1500	1640									



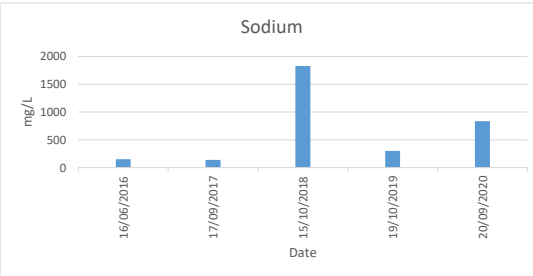
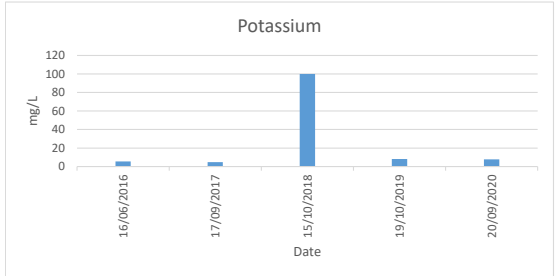
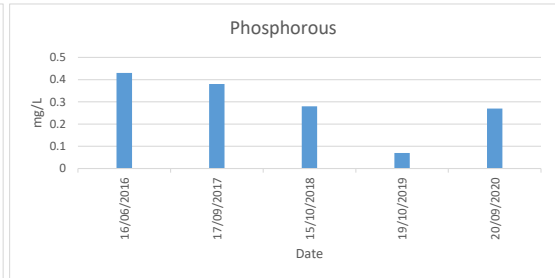
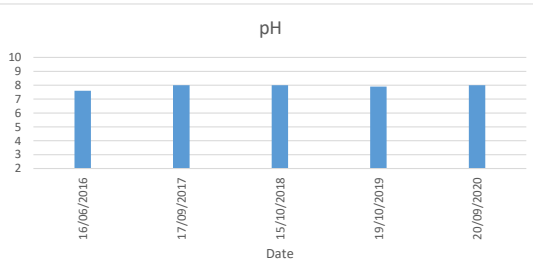
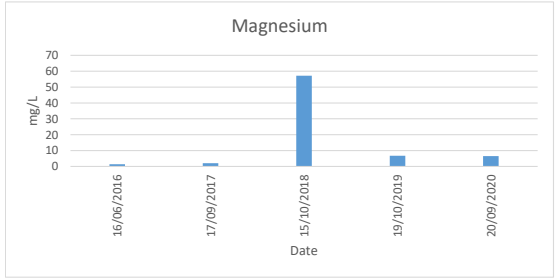
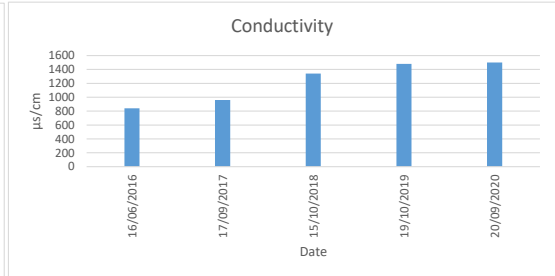
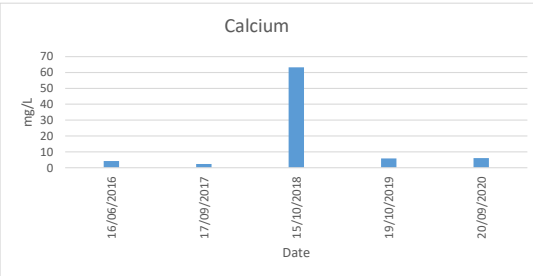
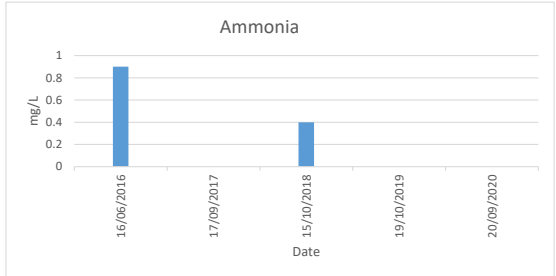
**Point 10: Piezometer Water Quality Test Results F128 Dam SW Point**

Date Sampled				22/09/2015	16/06/2016	17/09/2017	15/10/2018	19/10/2019	20/09/2020										
Date results obtained								14/11/2019	19/10/2020										
Type of Test	Name of Test	Test	units																
Quality monitoring	Ammonium nitrogen	ammonia	mg/L	<0.2	0.2	<0.1	<0.1	<0.1	<0.1										
Quality monitoring	Calcium	Ca	mg/L	38	18.9	15	21.8	19	17.2										
Quality monitoring	Electrical conductivity	EC	µs/cm	3250	2780	3630	3690	3720	3700										
Quality monitoring	Magnesium	Mg	mg/L	32.2	20.8	24.2	37.1	36	31.3										
Quality monitoring	Nitrate nitrogen	N( nitrate)	mg/L	1.6	<0.1	<0.1	0.2	<1	<1										
Quality monitoring	Total nitrogen	N(total)	mg/L	4	<2	<2	<2	<2	<2										
Quality monitoring	pH	pH	pH	7.8	8.3	8.4	8.5	8.5	8.2										
Quality monitoring	Phosphorus	P	mg/L	0.47	0.22	0.16	0.09	0.07	0.23										
Quality monitoring	Potassium	K	mg/L	43.8	24.7	23.8	34.9	27	26.3										
Quality monitoring	Sodium	Na	mg/L	661	466	436	355	790	698										



**Point 13: Piezometer Water Quality Test Results Old Chardonnay 6 SW End**

Date Sampled				16/06/2016	17/09/2017	15/10/2018	19/10/2019	20/09/2020												
Date results obtained							14/11/2019	19/10/2020												
Type of Test	Name of Test	Test	units																	
Quality monitoring	Ammonium nitrogen	ammonia	mg/L	0.9	<0.1	0.4	<0.1	<0.1												
Quality monitoring	Calcium	Ca	mg/L	4.25	2.31	63.3	5.8	6.06												
Quality monitoring	Electrical conductivity	EC	µs/cm	840	960	1340	1480	1500												
Quality monitoring	Magnesium	Mg	mg/L	1.37	2	57.2	6.7	6.47												
Quality monitoring	Nitrate nitrogen	N( nitrate)	mg/L	0.6	<0.1	0.1	<1	<1												
Quality monitoring	Total nitrogen	N(total)	mg/L	2	<2	2	<2	<2												
Quality monitoring	pH	pH	pH	7.6	8	8	7.9	8												
Quality monitoring	Phosphorus	P	mg/L	0.43	0.38	0.28	0.07	0.27												
Quality monitoring	Potassium	K	mg/L	5.6	4.8	100	8.2	7.8												
Quality monitoring	Sodium	Na	mg/L	152	140	1830	300	836												





**EPA ENVIRONMENTAL MONITORING**

Type of Monitoring Point	How Monitored	Location Description	Frequency
Odour	Odour Intensity and Descriptor Sheet; observation.	Boundary of evaporation ponds "EPA 21" & "EPA 22" on site map.	Daily (working days)

Type of Monitoring Point	How Monitored	Location Description	Frequency
Weather conditions other than rainfall - temperature, wind speed, wind direction, humidity	Handheld weather meter	Boundary of evaporation ponds "EPA 21" & "EPA 22" on site map.	Daily (working days)

Type of Monitoring Point	How Monitored	Location Description	Frequency
Rainfall	Rain gauge	Boundary of evaporation ponds "EPA 21" & "EPA 22" on site map.	Daily (working days)

Type of Monitoring Point	How Monitored	Location Description	Frequency
Biosolids Cake	Biosolids sample, laboratory analysis	Evaporation ponds sludge	As required

<b>Test Type</b>	<b>EPA Reference Points</b>	<b>Frequency of Monitoring</b>	<b>Next Sample Date</b>
Soil quality monitoring	3, 4, 5, 6, 11	Annual	September
Groundwater quality monitoring	7, 8, 9, 10	Annual	September
Groundwater standing level	7, 8, 9, 10	6 monthly	March & September
Effluent quality monitoring: inflow and outflow	1, 2	6 monthly	March & September
Effluent volume monitoring: inflow and outflow	1,2	Monthly	Monthly