



EPA ENVIRONMENTAL MONITORING

MANDATORY MONITORING																		
EPA Identification point number	Type of Monitoring Point	Type of Discharge Point	How Monitored	Location Description	Detail	Volume	Pollutant											
							Test	BOD	COD	EC	N (total)	pH	P (total)	SAR	TDS	TSS		
Point 1: Evaporation Bay North End. Influent.	Volume monitoring. Influent quality monitoring.	Volume monitoring. Influent quality monitoring.	Volume: flowmeter & cont. logger. Quality: influent sample.	Inflow to evaporation ponds "EPA 1" on site map. North end evap bay.	Test		BOD	COD	EC	N (total)	pH	P (total)	SAR	TDS	TSS			
					unit of measure		mg/L	mg/L	µs/cm	mg/L	pH	mg/L	SAR	mg/L	mg/L			
					frequency		continuous during discharge every 6 months											
					sampling method		flow meter & cont. logger representative sample											
Point 2: Evaporation Bay South End. Effluent.	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 evaporation ponds "EPA 2" on site map.	Test		BOD	COD	EC	N (total)	pH	P (total)	SAR	TDS	TSS			
					unit of measure		mg/L	mg/L	µs/cm	mg/L	pH	mg/L	SAR	mg/L	mg/L			
					frequency		continuous during discharge every 6 months											
					sampling method		flow meter representative sample											
Point 3: Soil Sample Chardonnay 7	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	mmol(+)/kg	mmol(+)/kg	mmol(+)/kg	mg/kg	mg/kg	pH	mg/kg	mg/kg	SAR	mg/kg
					frequency		yearly										spec. freq 1	
					sampling method		composite sample											
Point 4: Soil Sample Old Canada Muscat 11	Soil quality monitoring		Soil sample.	Soil control point "EPA 4" 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	mmol(+)/kg	mmol(+)/kg	mmol(+)/kg	mg/kg	mg/kg	pH	mg/kg	mg/kg	SAR	mg/kg
					frequency		yearly										spec. freq 1	
					sampling method		composite sample											
Point 5: Soil Sample Red Frontignac 12	Soil quality monitoring		Soil sample.	Soil control point "EPA 5" 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	mmol(+)/kg	mmol(+)/kg	mmol(+)/kg	mg/kg	mg/kg	pH	mg/kg	mg/kg	SAR	mg/kg
					frequency		yearly										spec. freq 1	
					sampling method		composite sample											
Point 11: Soil Sample Old Chardonnay 5	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	P sorption capacity
					unit of measure		µs/cm	mmol(+)/kg	mmol(+)/kg	mmol(+)/kg	mmol(+)/kg	mg/kg	mg/kg	pH	mg/kg	mg/kg	SAR	mg/kg
					frequency; sampling method		yearly; composite sample										spec. freq 1	

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		
Point 7: Piezometer Red Frontignac Row 1	Groundwater quality monitoring. Standing water level monitoring		Groundwater sample. Groundwater level m'mnt.	Soil control point "EPA 7" on site map.	Test		ammonia	Ca	EC	Mg	Nitrate N	N (total)	pH	P (total)	K	Na		
					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	yearly											
					sampling method	inspection	representative sample											

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		
Point 8: Piezometer South End Lined Dam	Groundwater quality monitoring. Standing water level monitoring		Groundwater sample. Groundwater level m'mnt.	Soil control point "EPA 8" on site map.	Test		ammonia	Ca	EC	Mg	Nitrate N	N (total)	pH	P (total)	K	Na		
					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	yearly											
					sampling method	inspection	representative sample											

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		
Point 9: Piezometer South West End Row 8 Touriga 13	Groundwater quality monitoring. Standing water level monitoring		Groundwater sample. Groundwater level m'mnt.	Soil control point "EPA 9" on site map.	Test		ammonia	Ca	EC	Mg	Nitrate N	N (total)	pH	P (total)	K	Na		
					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	yearly											
					sampling method	inspection	representative sample											

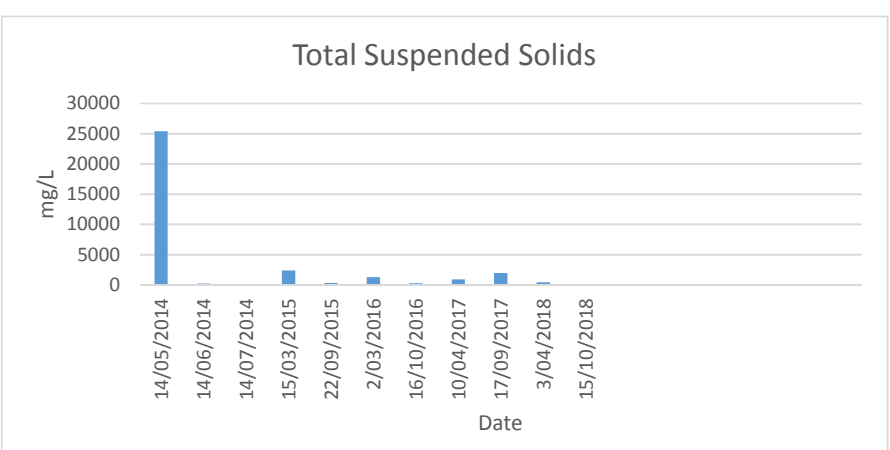
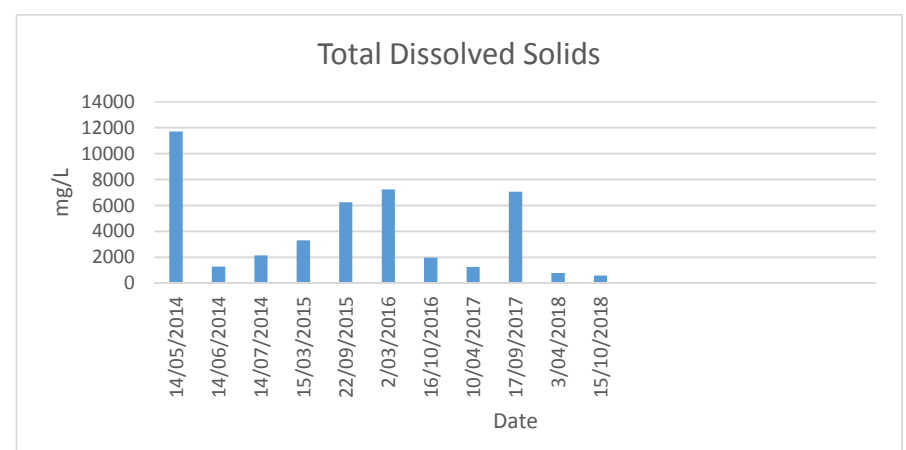
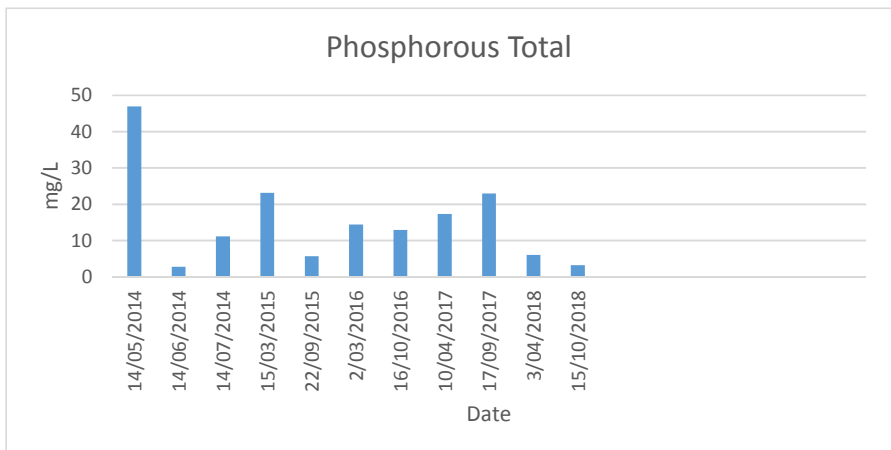
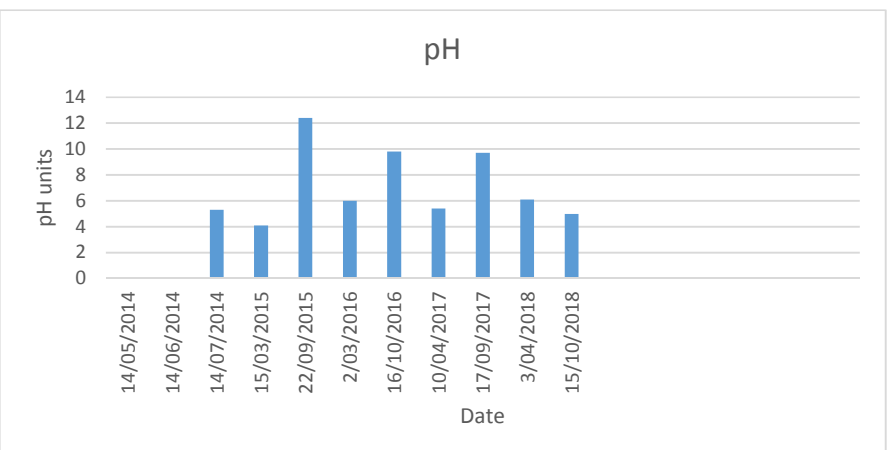
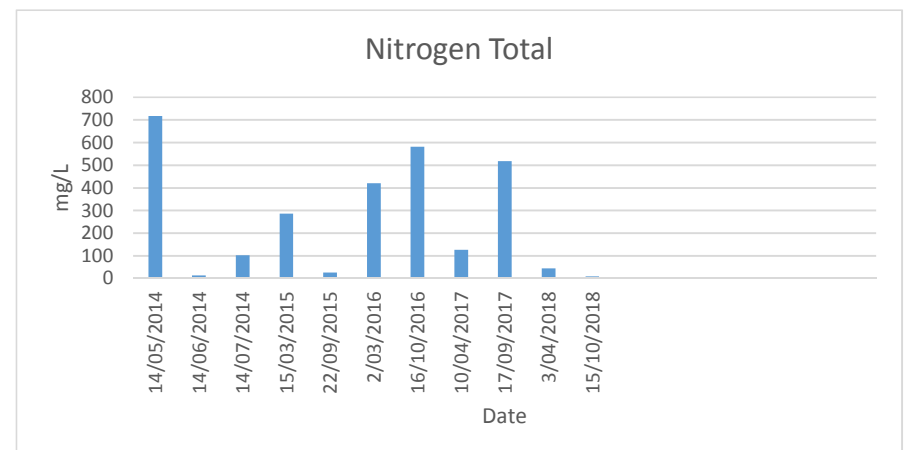
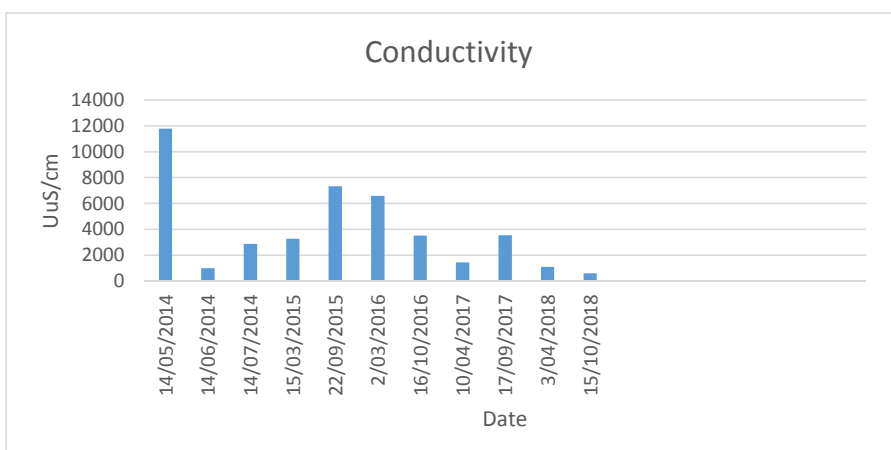
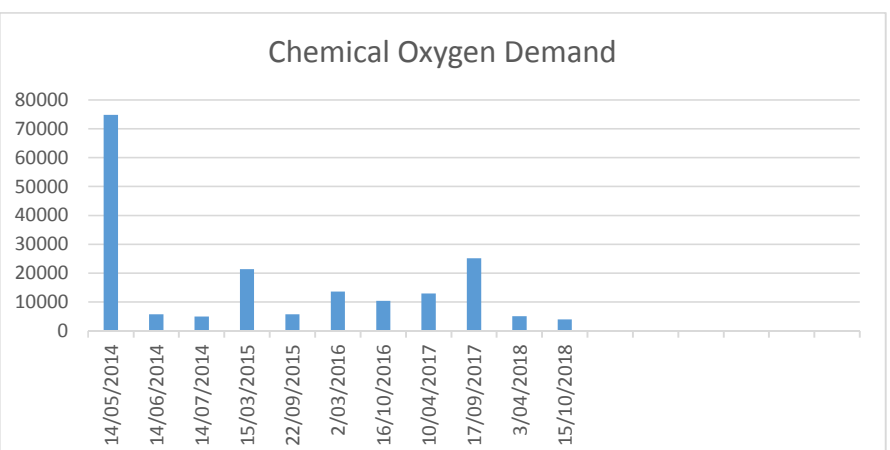
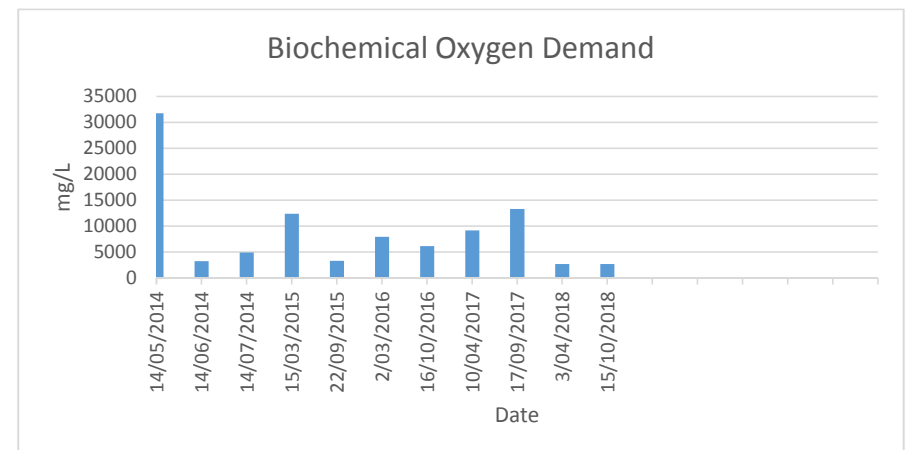
EPA Identification point number	Type of Monitoring Point	Type of Discharge Point	How Monitored	Location Description	Detail	Standing Water Level	Pollutant											
							ammonia	Ca	EC	Mg	Nitrate N	N (total)	pH	P (total)	K	Na		
Point 10: Piezometer South West Point F128 dam	Groundwater quality monitoring. Standing water level monitoring		Groundwater sample. Groundwater level m'mnt.	Soil control point "EPA 10" on site map.	Test		ammonia	Ca	EC	Mg	Nitrate N	N (total)	pH	P (total)	K	Na		
					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	yearly											
					sampling method	inspection	representative sample											

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		
Point 13: Piezometer West End Old Chardonay 6	Groundwater quality monitoring. Standing water level monitoring		Groundwater sample. Groundwater level m'mnt.	Soil control point "EPA 13" on site map.	Test		ammonia	Ca	EC	Mg	Nitrate N	N (total)	pH	P (total)	K	Na		
					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	yearly											
					sampling method	inspection	representative sample											

Point 1: Influent Quality Monitoring

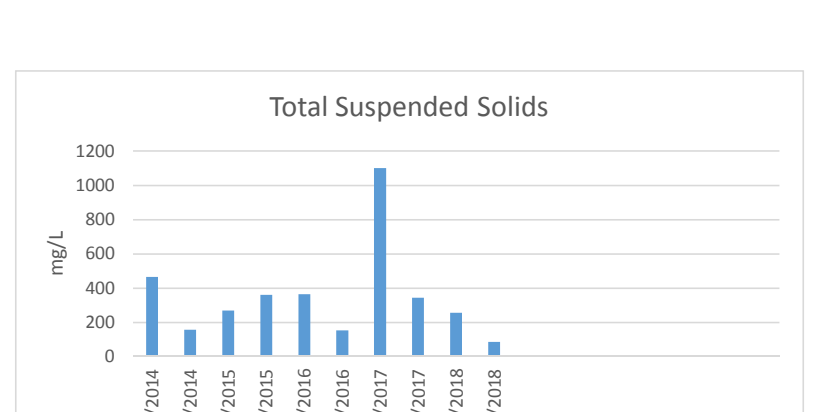
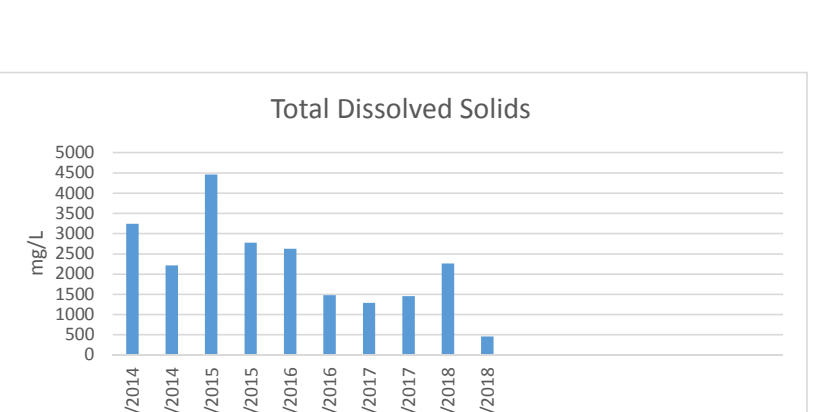
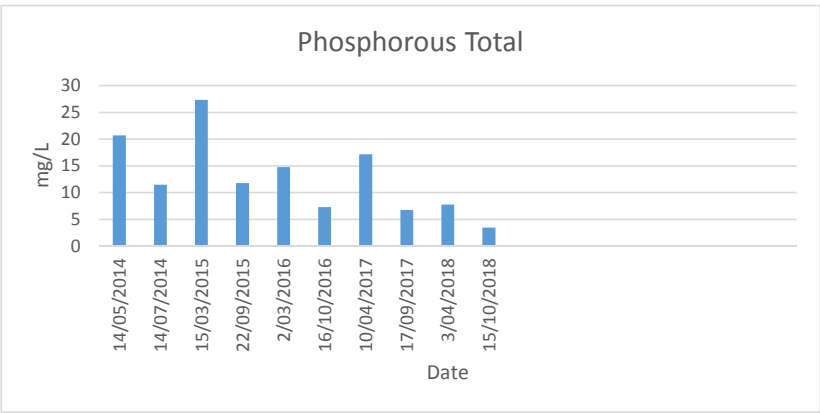
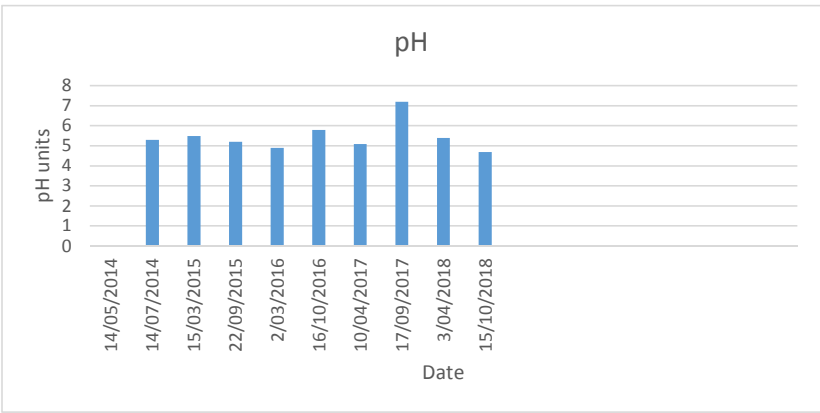
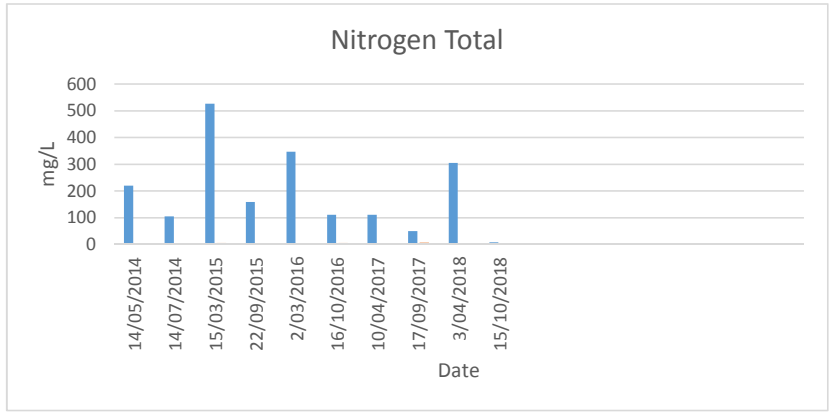
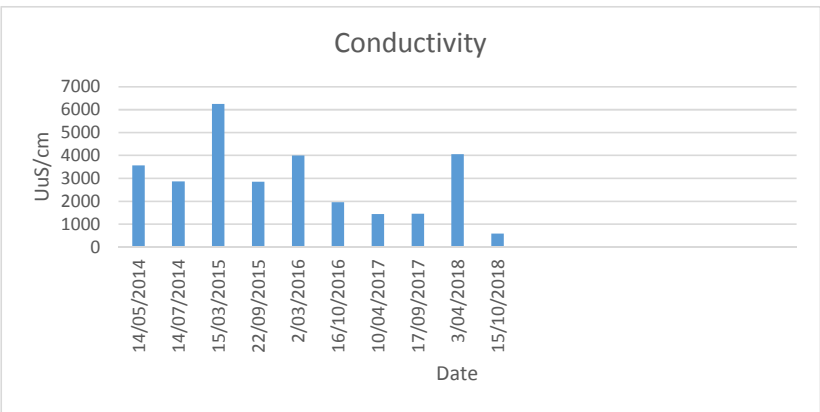
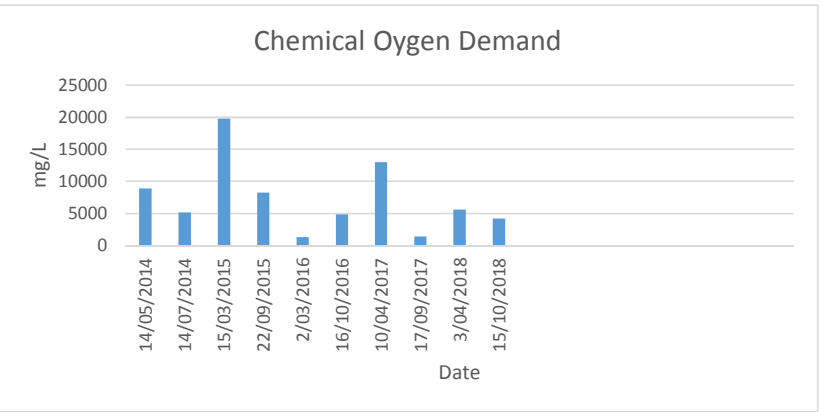
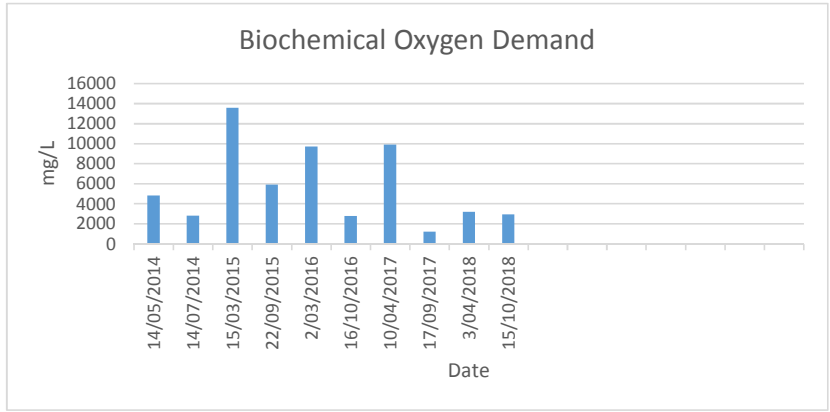
Date

Type of Test	Name of Test	Test	Units	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							
Quality monitoring	Biological oxygen demand	BOD	mg/L	31800	3260	4950	12400	3320	7920	6190	9210	13300	2680	2710							
Quality monitoring	Chemical oxygen demand	COD	mg/L	74900	5820	5060	21400	5850	13700	10400	13000	25200	5130	4020							
Quality monitoring	Electrical conductivity	EC	µs/cm	11800	1020	2900	3290	7330	6610	3540	1450	3560	1100	612							
Quality monitoring	Nitrogen	N (total)	mg/L	717	13	103	286	27	420	582	127	518	45	10							
Quality monitoring	pH	pH	pH	n/a	n/a	5.3	4.1	12.4	6	9.8	5.4	9.7	6.1	5							
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							
Quality monitoring	Sodium absorption ratio	SAR	SAR	<1	2	2	1	2	2	3	2	1	1	2							
Quality monitoring	Total dissolved solids	TDS	mg/L	11700	1280	2140	3310	6250	7240	1960	1240	7070	788	576							
Quality monitoring	Total suspended solids	TSS	mg/L	25400	254	144	2410	322	1310	312	945	1980	458	110							



Point 2: Effluent Quality Monitoring

Type of Test	Name of Test	Test	Units	Date																
				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							
Quality monitoring	Biological oxygen demand	BOD	mg/L	4830	2820	13600	5920	9730	2800	9930	1220	3220	2970							
Quality monitoring	Chemical oxygen demand	COD	mg/L	8940	5160	19800	8260	1350	4860	13000	1410	5620	4250							
Quality monitoring	Electrical conductivity	EC	µs/cm	3580	2870	6260	2860	4010	1960	1450	1460	4060	600							
Quality monitoring	Nitrogen	N (total)	mg/L	221	105	527	159	348	112	111	50	306	9							
Quality monitoring	pH	pH	pH		5.3	5.5	5.2	4.9	5.8	5.1	7.2	5.4	4.7							
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							
Quality monitoring	Sodium absorption ratio	SAR	SAR	1	2	1	1	2	6	2	4	1	1							
Quality monitoring	Total dissolved solids	TDS	mg/L	3240	2210	4460	2770	2620	1480	1290	1450	2260	458							
Quality monitoring	Total suspended solids	TSS	mg/L	464	156	269	360	363	152	1100	343	255	86							

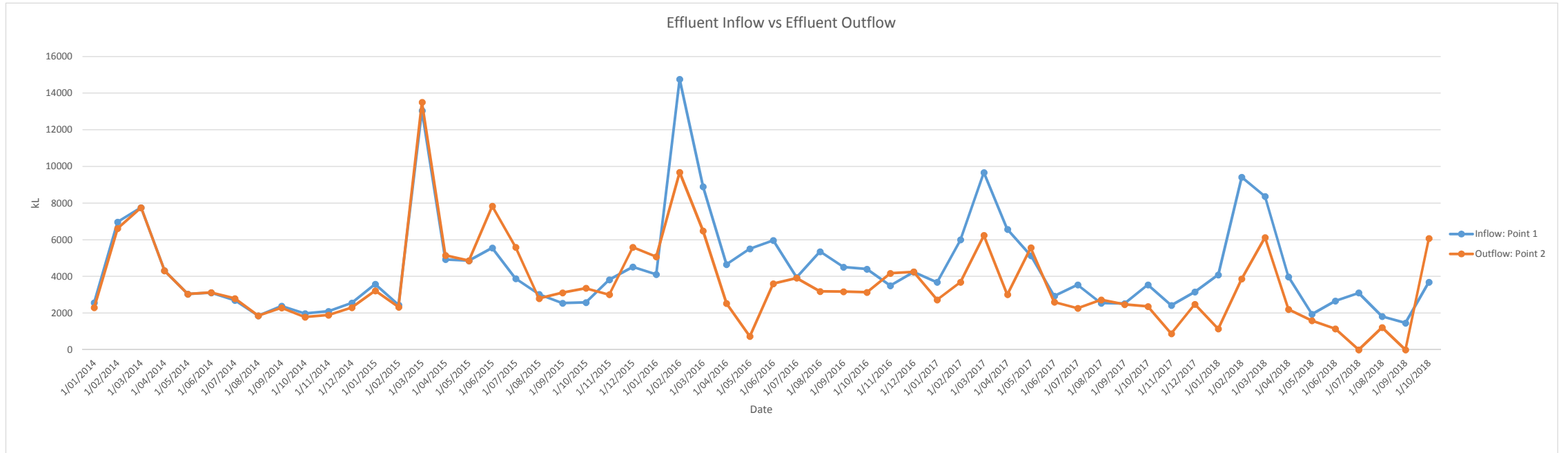


Influent (Inflow) vs Effluent (Outflow)

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
29/12/2014	2554	2300
26/01/2015	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		
31/12/2018		

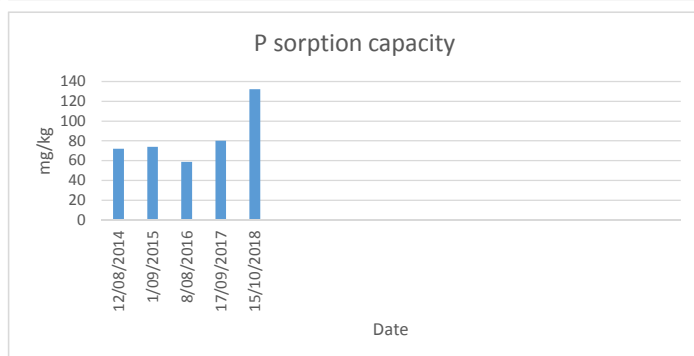
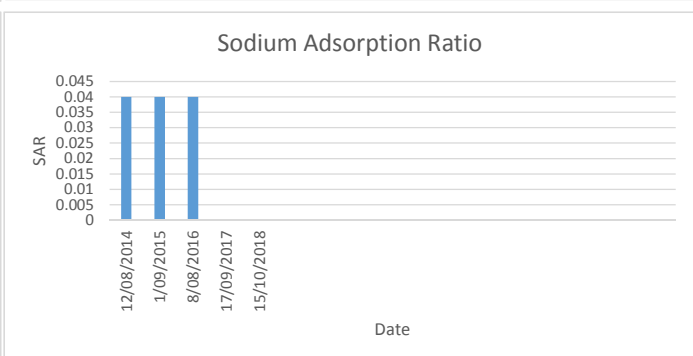
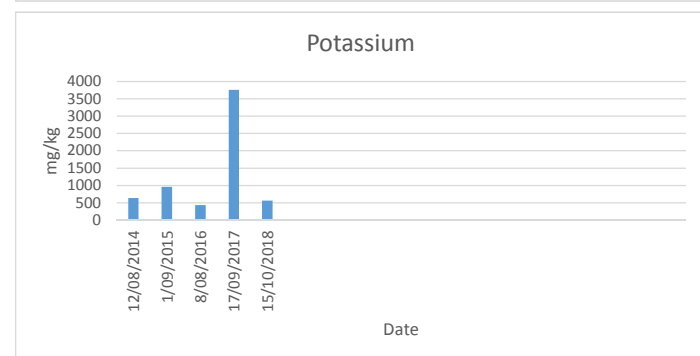
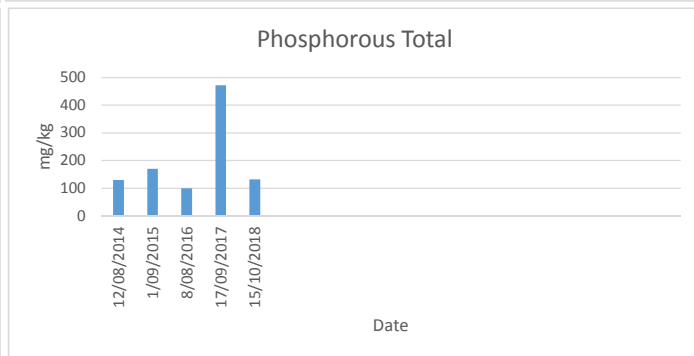
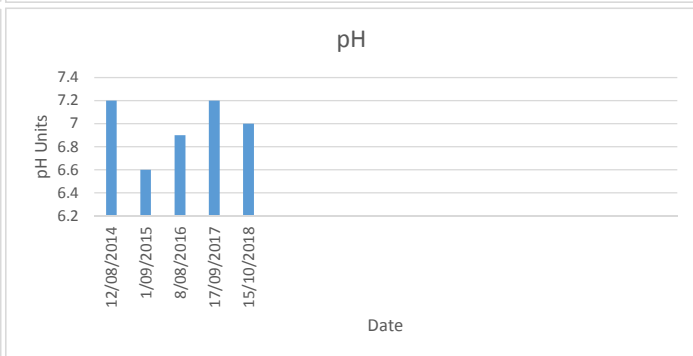
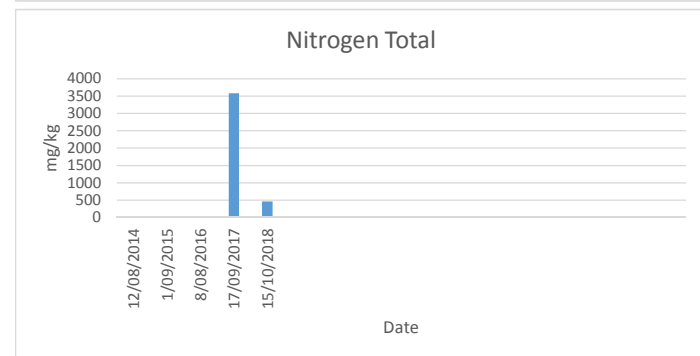
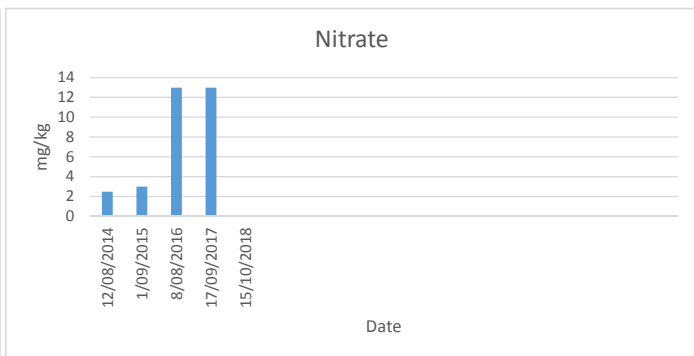
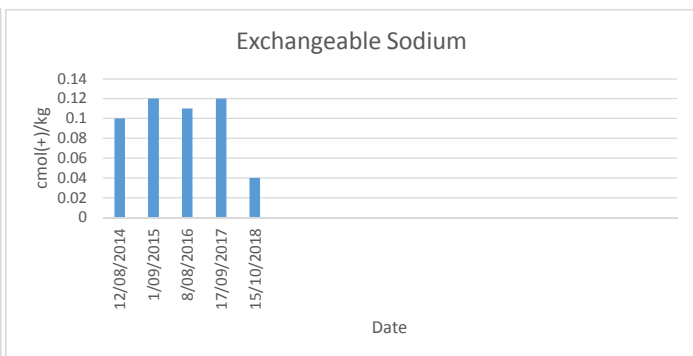
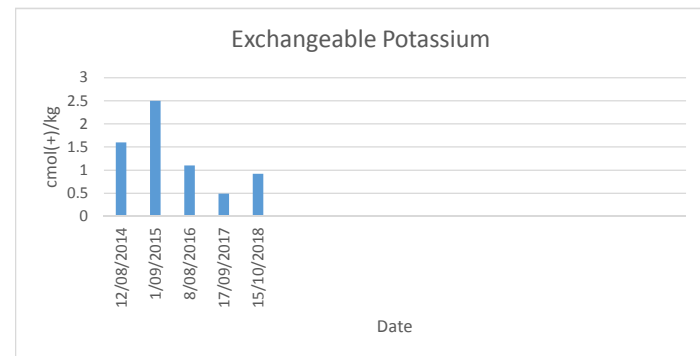
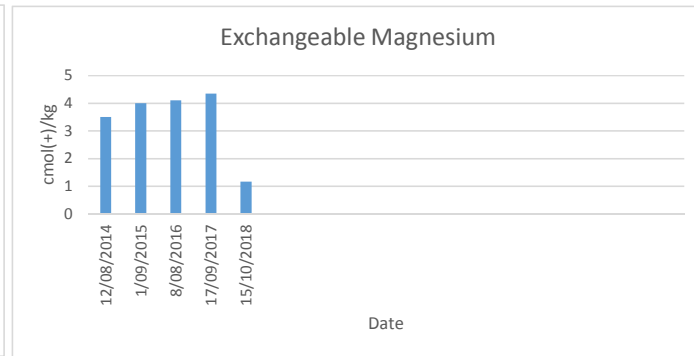
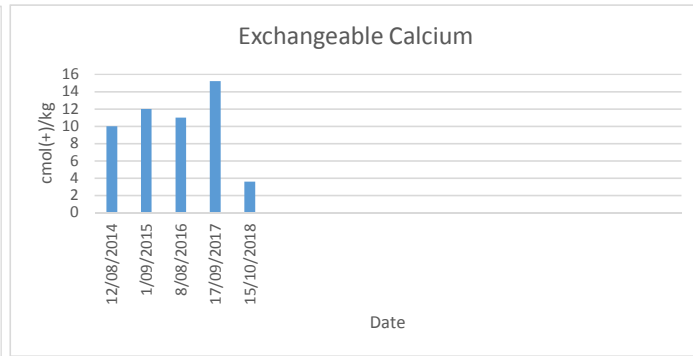
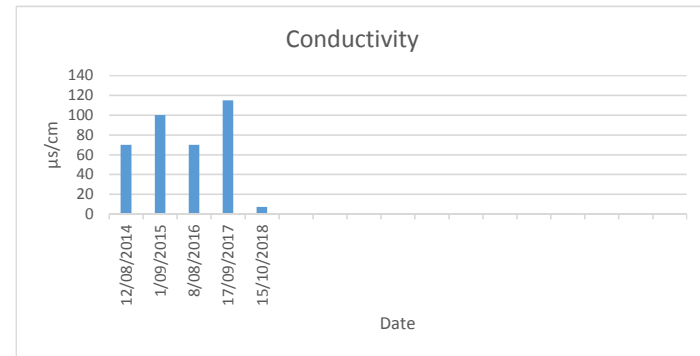
went to winter storage

had to pump out of winter storage



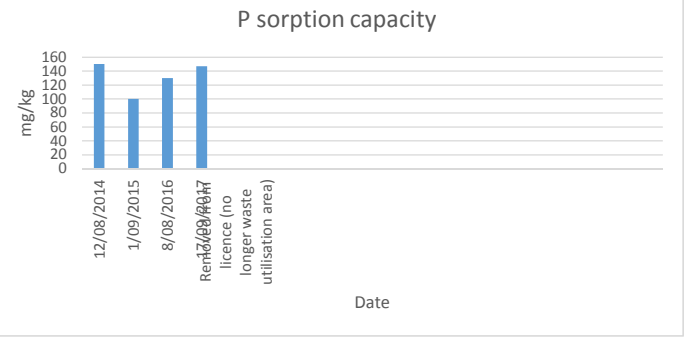
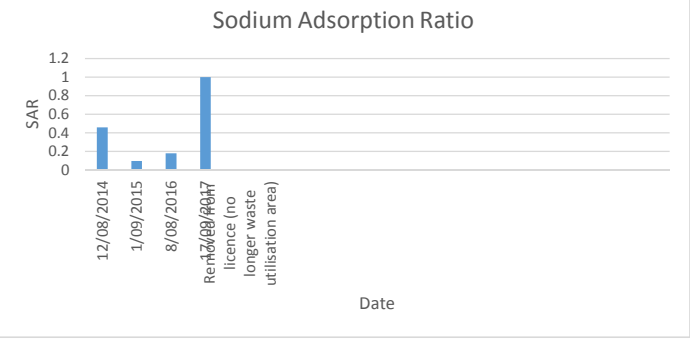
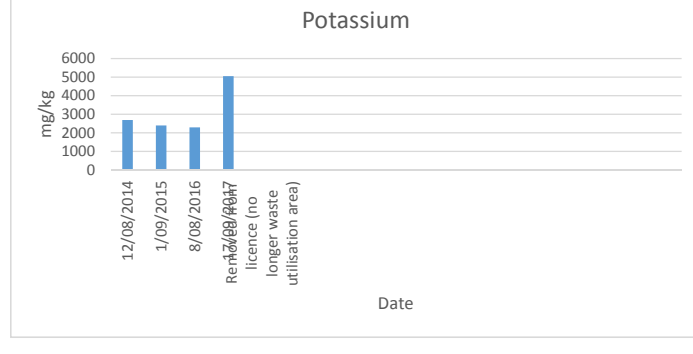
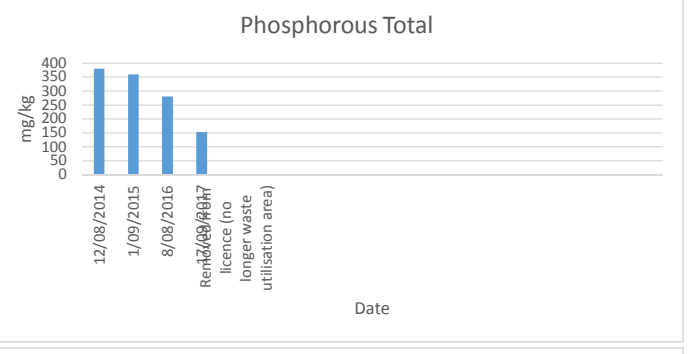
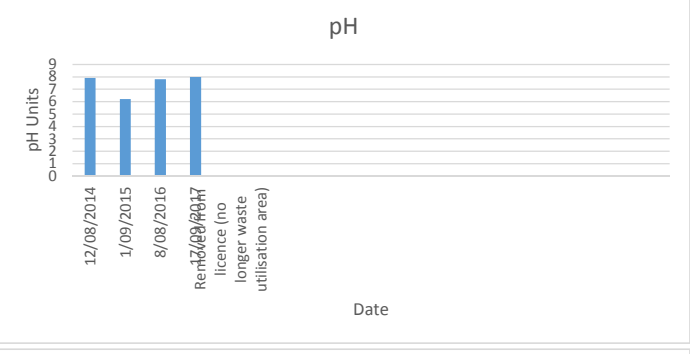
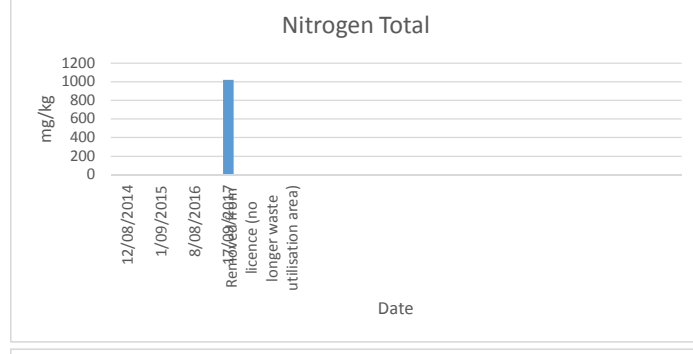
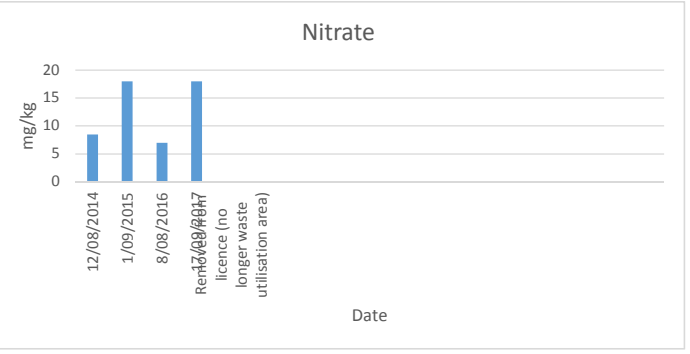
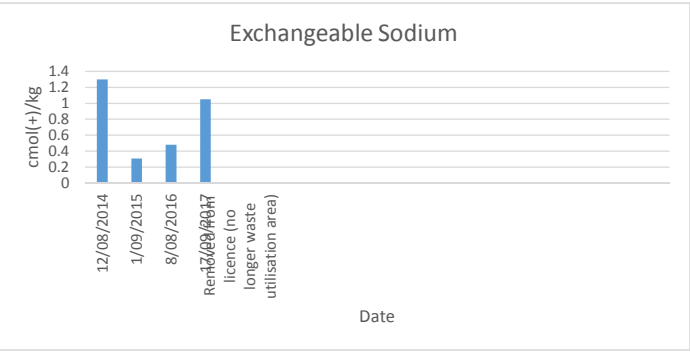
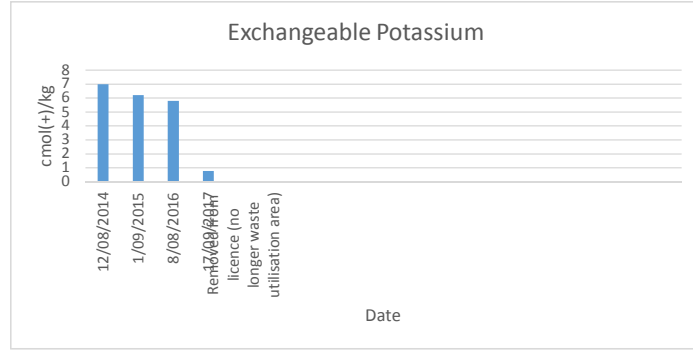
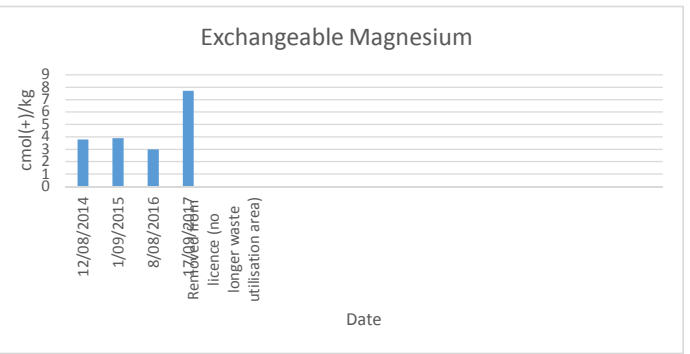
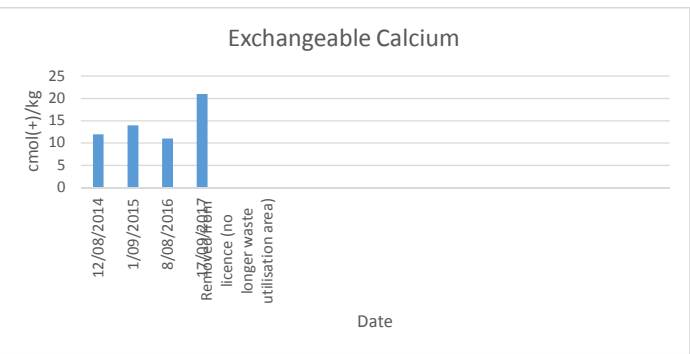
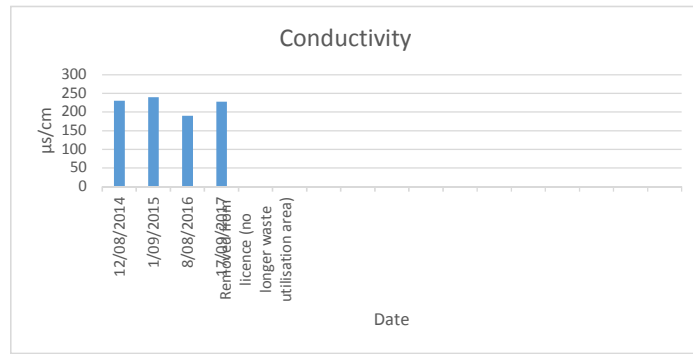
Point 3: Soil Test Results Chardonnay 7

Type of Test	Name of Test	Test	Units	Date																
				12/08/2014	1/09/2015	8/08/2016	17/09/2017	15/10/2018												
Quality monitoring	Electrical conductivity	EC	µs/cm	70	100	70	115	7												
Quality monitoring	Exchangeable calcium	Exch. Ca	cmol(+)/kg	10	12	11	15.2	3.6												
Quality monitoring	Exchangeable magnesium	Exch. Mg	cmol(+)/kg	3.5	4	4.1	4.35	1.17												
Quality monitoring	Exchangeable potassium	Exch. K	cmol(+)/kg	1.6	2.5	1.1	0.49	0.92												
Quality monitoring	Exchangeable sodium	Exch. Na	cmol(+)/kg	0.1	0.12	0.11	0.12	0.04												
Quality monitoring	Nitrate nitrogen	Nitrate	mg/kg	2.5	3	13	13	<5												
Quality monitoring	Total nitrogen	N (total)	mg/kg	1	2	1	3580	458												
Quality monitoring	pH	pH	pH	7.2	6.6	6.9	7.2	7												
Quality monitoring	Total phosphorus	P (total)	mg/kg	130	170	100	472	132												
Quality monitoring	Potassium	K	mg/kg	640	960	440	3760	563												
Quality monitoring	Sodium adsorption ratio	SAR	SAR	0.04	0.04	0.04	<1	<1												
Quality monitoring	P sorption capacity	P sorption capacity	mg/kg	72	74	59	80	132												



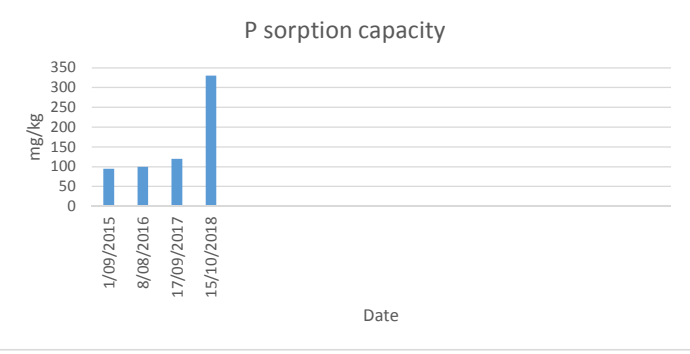
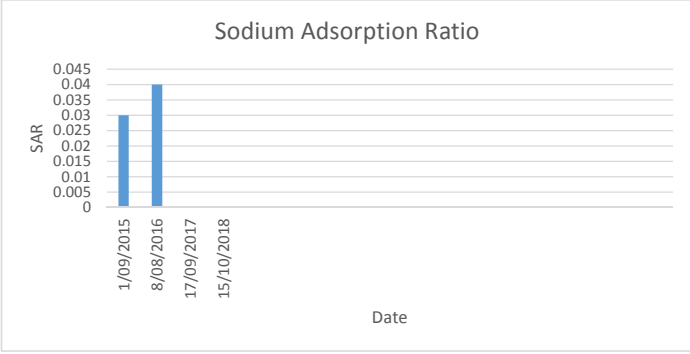
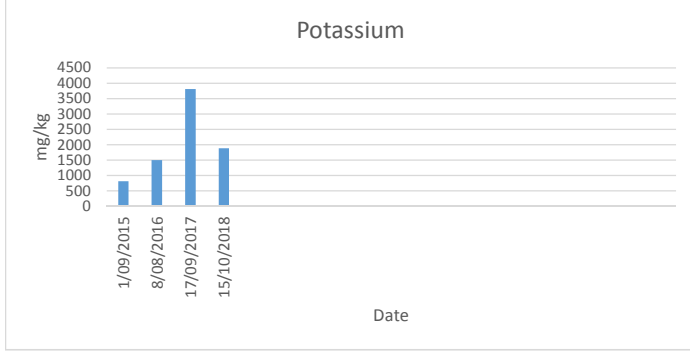
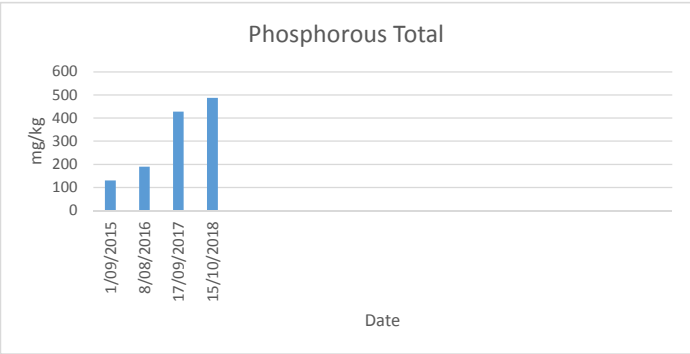
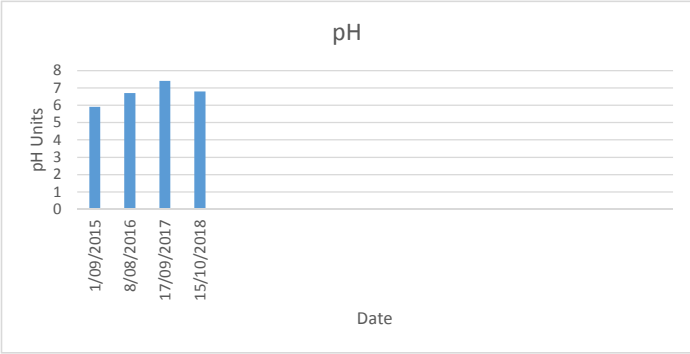
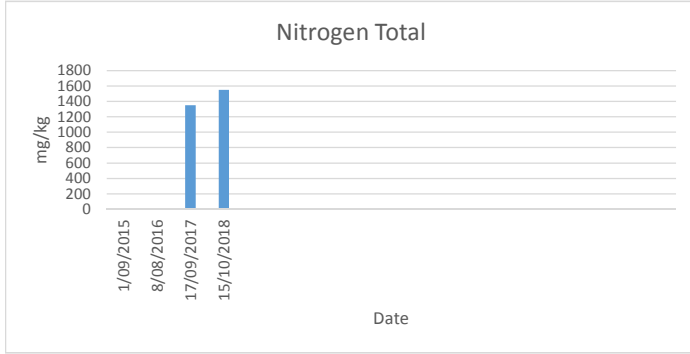
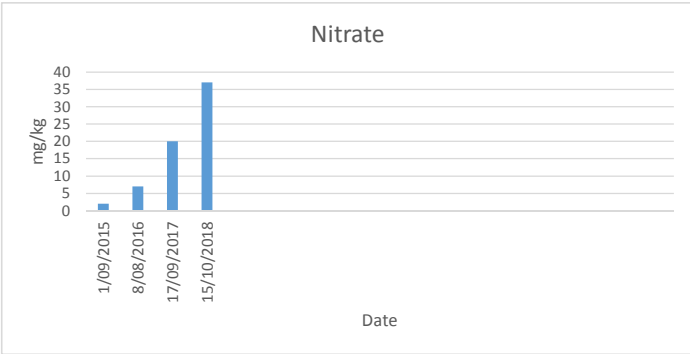
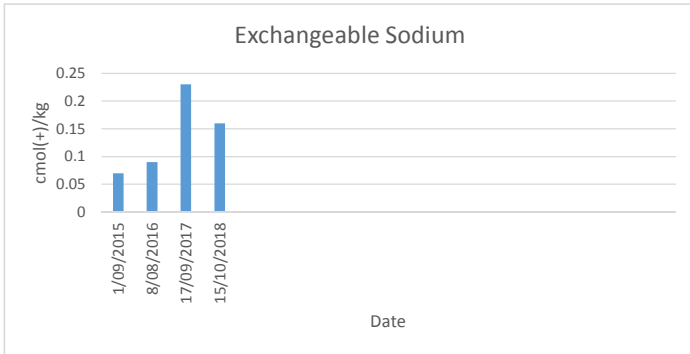
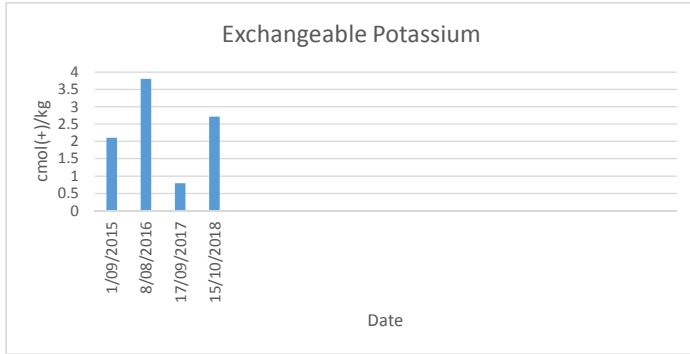
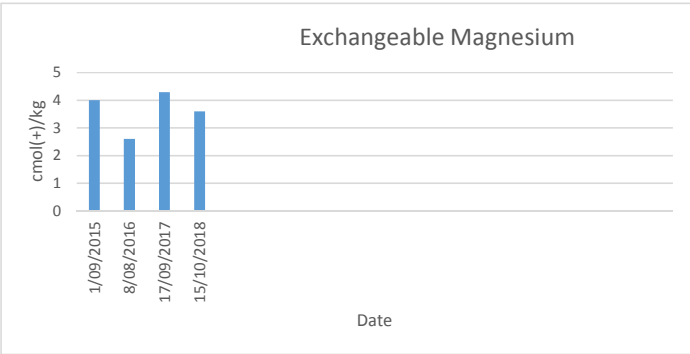
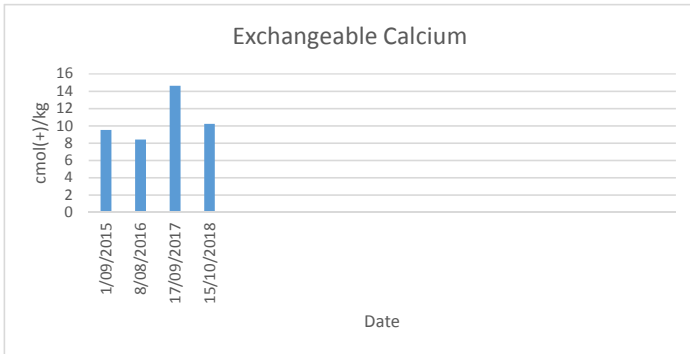
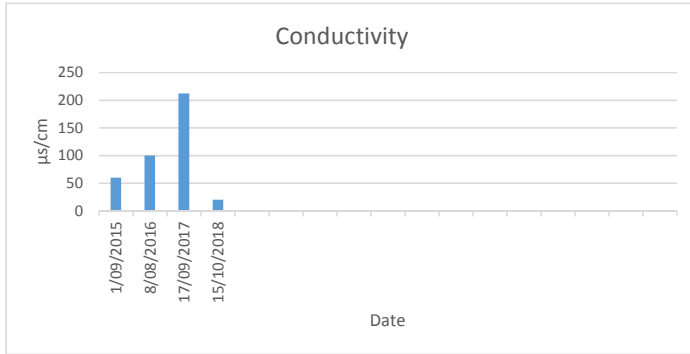
Point 4: Soil Test Results Canada Muscat 11

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													



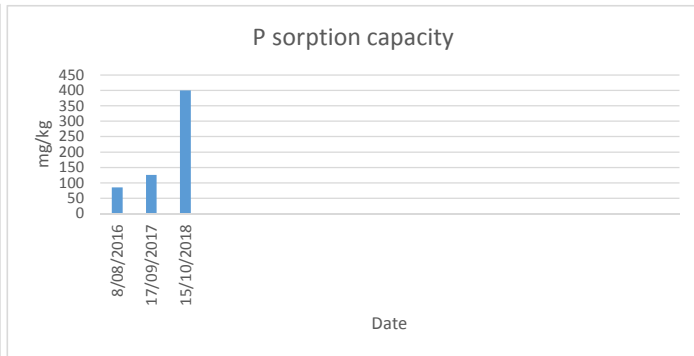
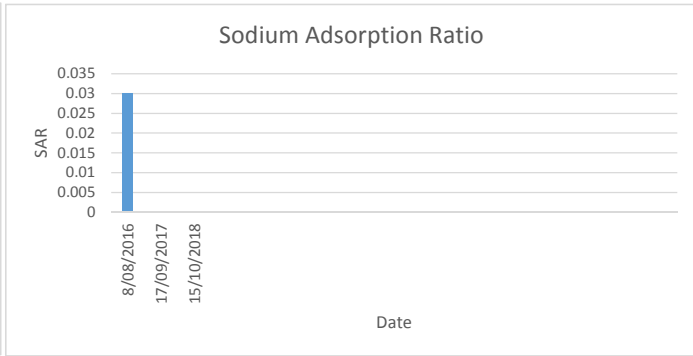
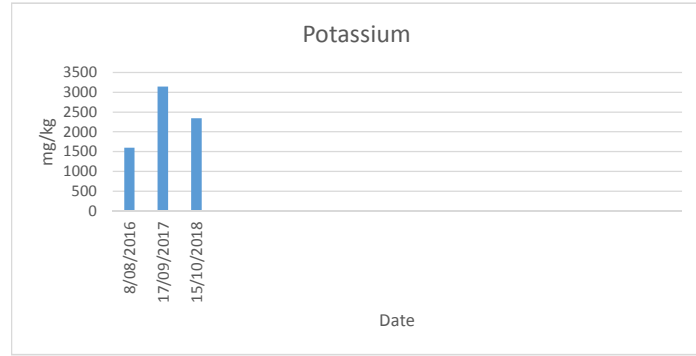
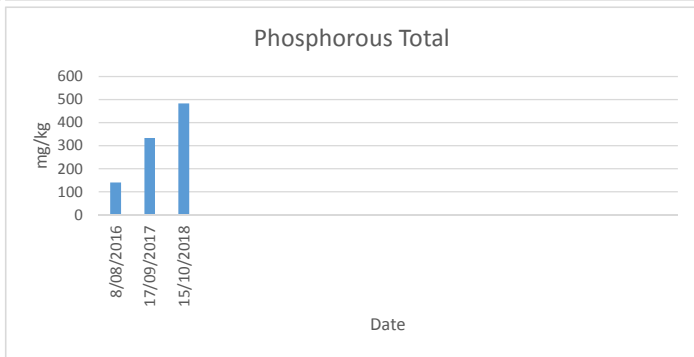
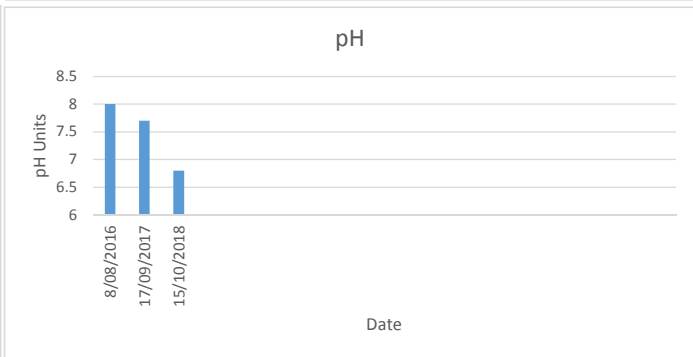
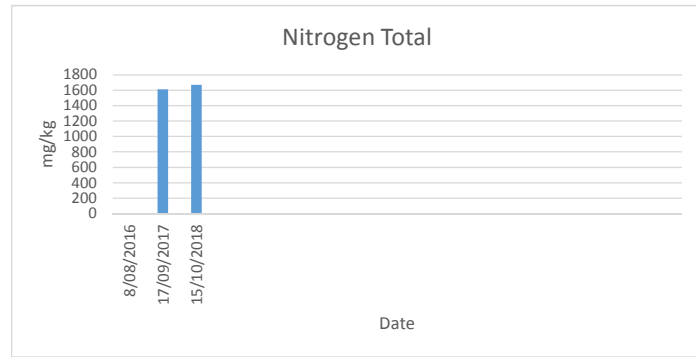
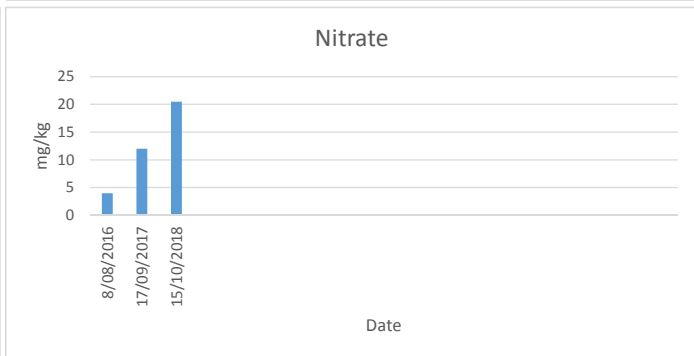
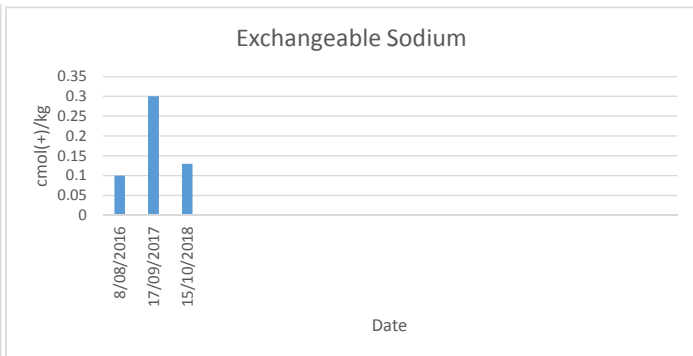
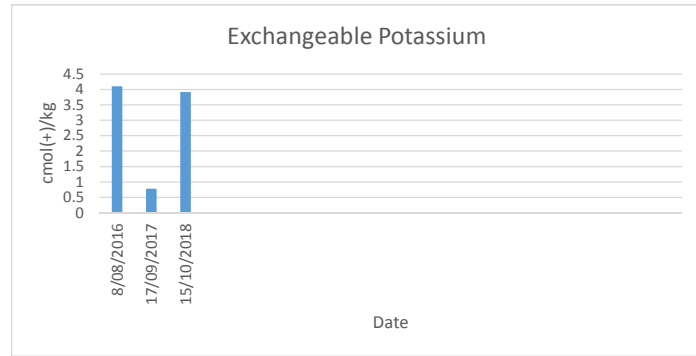
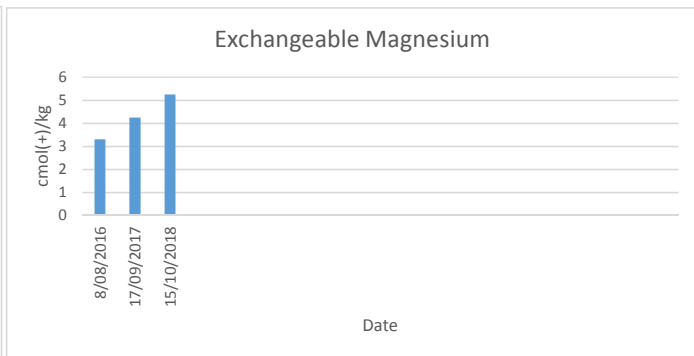
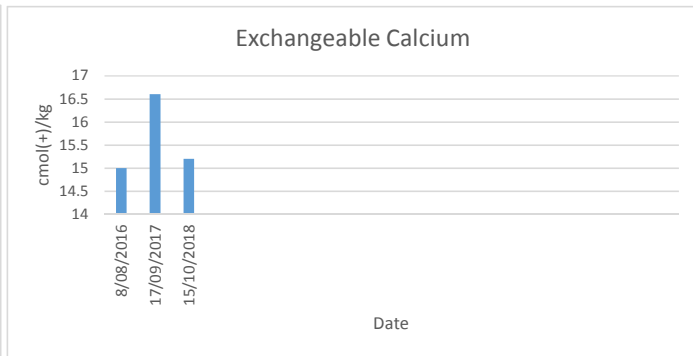
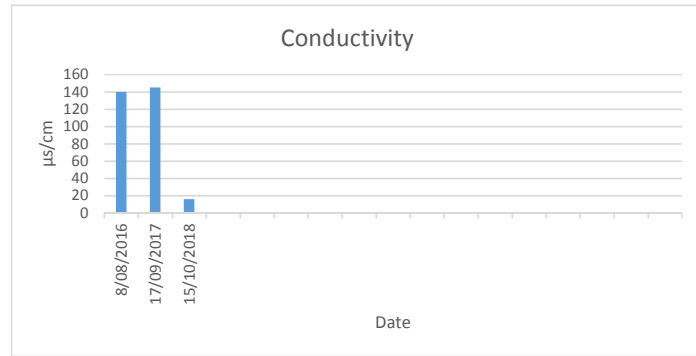
Point 11: Soil Test Results Old Chardonnay 5

Type of Test	Name of Test	Test	Units	Date																
				1/09/2015	8/08/2016	17/09/2017	15/10/2018													
Quality monitoring	Electrical conductivity	EC	µs/cm	60	100	212	20													
Quality monitoring	Exchangeable calcium	Exch. Ca	cmol(+)/kg	9.5	8.4	14.6	10.2													
Quality monitoring	Exchangeable magnesium	Exch. Mg	cmol(+)/kg	4	2.6	4.29	3.59													
Quality monitoring	Exchangeable potassium	Exch. K	cmol(+)/kg	2.1	3.8	0.79	2.71													
Quality monitoring	Exchangeable sodium	Exch. Na	cmol(+)/kg	0.07	0.09	0.23	0.16													
Quality monitoring	Nitrate nitrogen	Nitrate	mg/kg	2	7	20	37													
Quality monitoring	Total nitrogen	N (total)	mg/kg	2	5	1350	1550													
Quality monitoring	pH	pH	pH	5.9	6.7	7.4	6.8													
Quality monitoring	Total phosphorus	P (total)	mg/kg	130	190	428	488													
Quality monitoring	Potassium	K	mg/kg	810	1500	3810	1880													
Quality monitoring	Sodium adsorption ratio	SAR	SAR	0.03	0.04	<1	<1													
Quality monitoring	P sorption capacity	P sorption capacity	mg/kg	95	100	120	330													



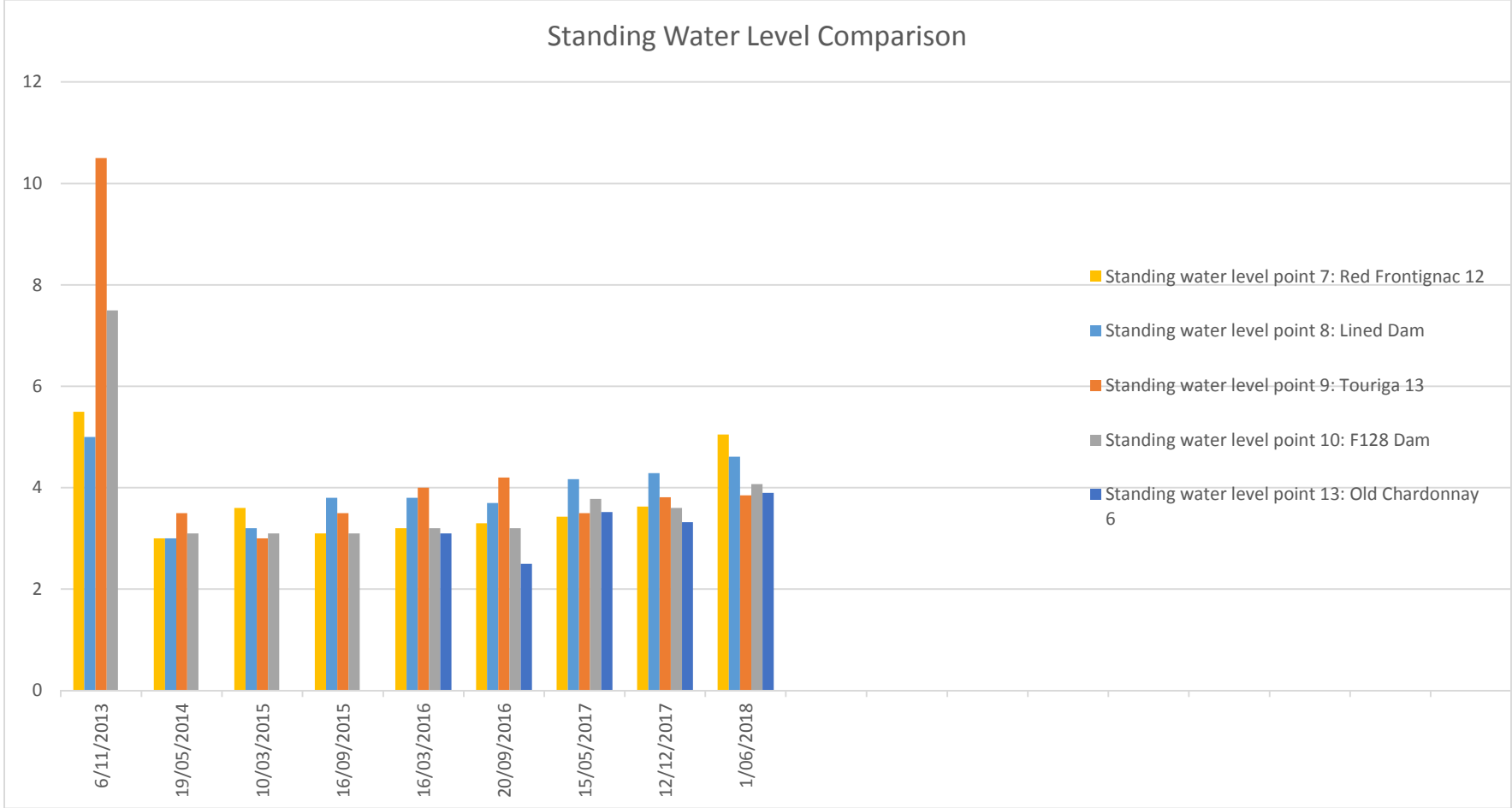
Point 12: Soil Test Results Old Chardonnay 6

Type of Test	Name of Test	Test	Units	Date																
				8/08/2016	17/09/2017	15/10/2018														
Quality monitoring	Electrical conductivity	EC	µs/cm	140	145	16														
Quality monitoring	Exchangeable calcium	Exch. Ca	cmol(+)/kg	15	16.6	15.2														
Quality monitoring	Exchangeable magnesium	Exch. Mg	cmol(+)/kg	3.3	4.24	5.24														
Quality monitoring	Exchangeable potassium	Exch. K	cmol(+)/kg	4.1	0.78	3.91														
Quality monitoring	Exchangeable sodium	Exch. Na	cmol(+)/kg	0.1	0.3	0.13														
Quality monitoring	Nitrate nitrogen	Nitrate	mg/kg	4	12	20.5														
Quality monitoring	Total nitrogen	N (total)	mg/kg	2	1610	1670														
Quality monitoring	pH	pH	pH	8	7.7	6.8														
Quality monitoring	Total phosphorus	P (total)	mg/kg	140	333	483														
Quality monitoring	Potassium	K	mg/kg	1600	3140	2340														
Quality monitoring	Sodium absorption ratio	SAR	SAR	0.03	<1	<1														
Quality monitoring	P sorption capacity	P sorption capacity	mg/kg	85	126	400														



Piezometer Standing Water Levels: depth in metres below surface

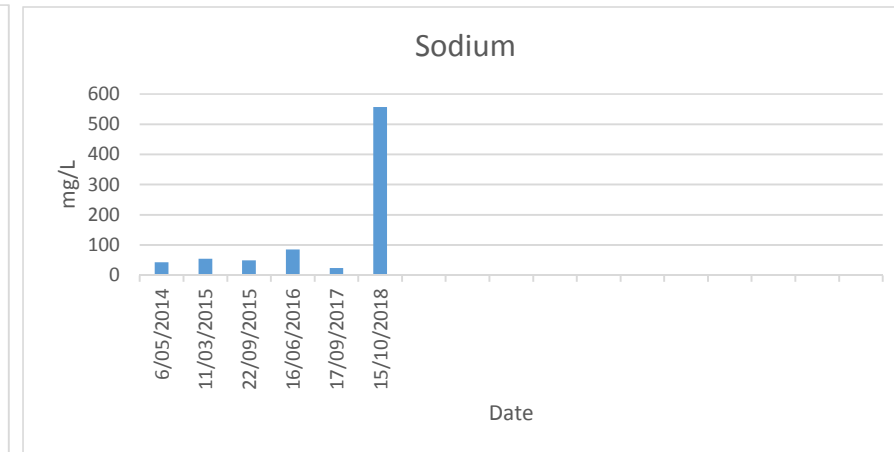
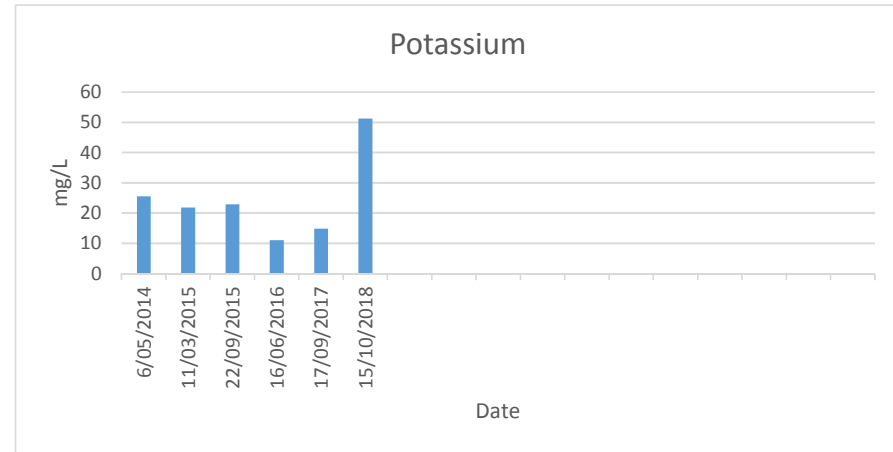
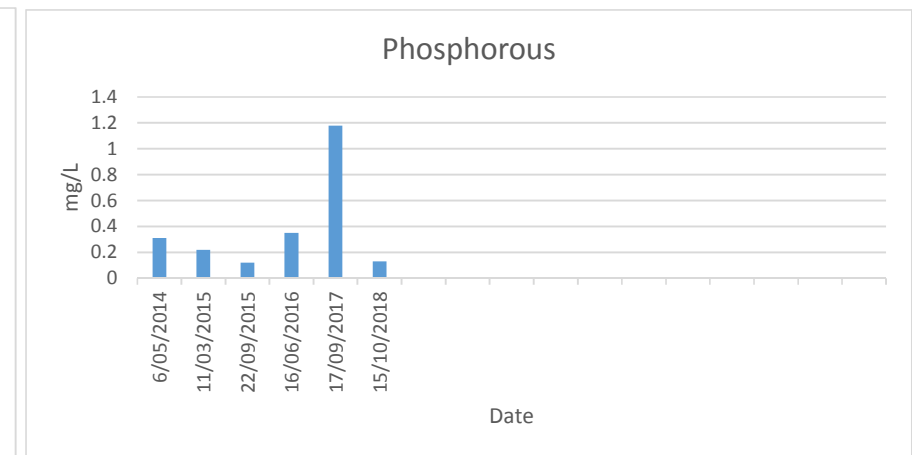
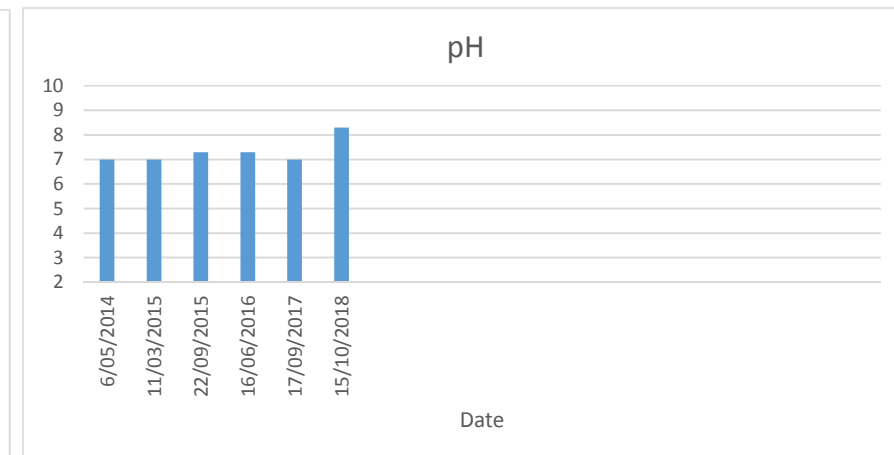
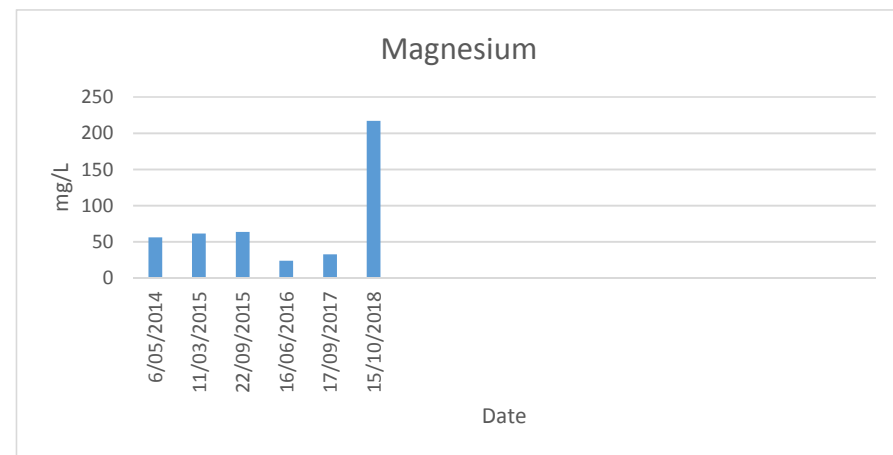
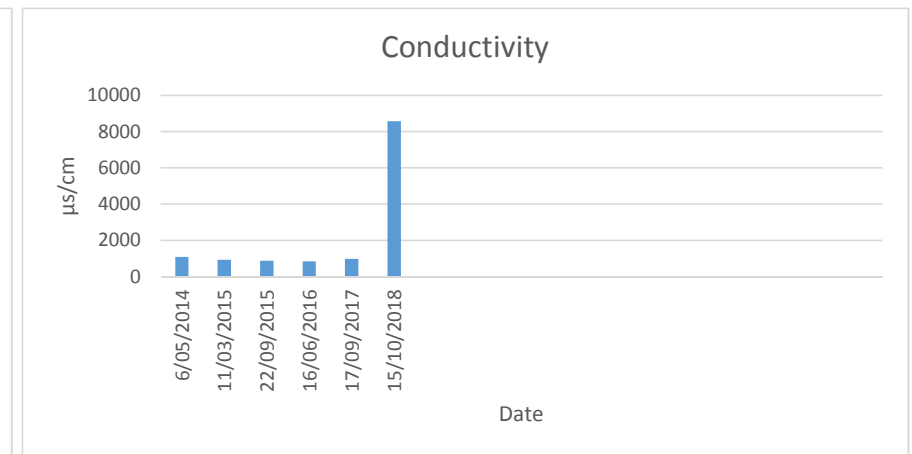
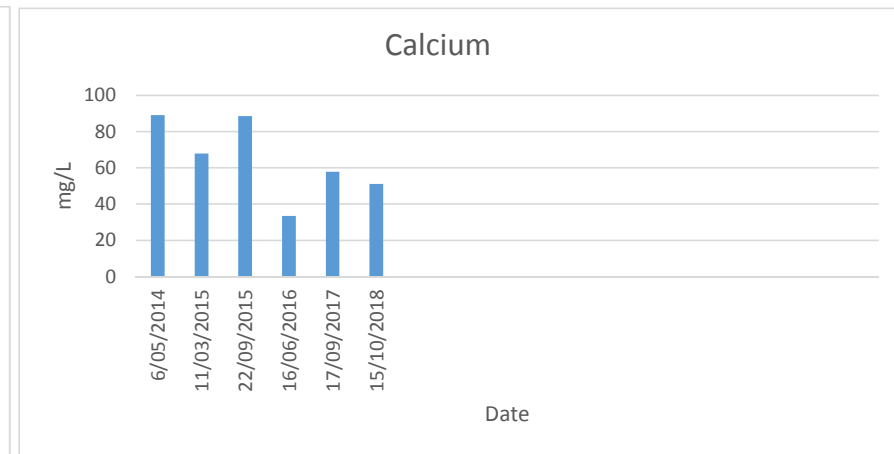
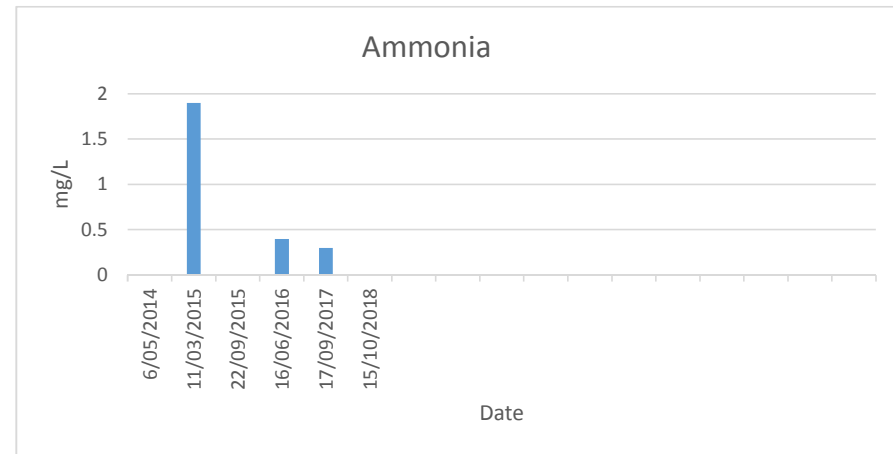
Date	Standing water level point 7: Red Frontignac 12	Standing water level point 8: Lined Dam	Standing water level point 9: Touriga 13	Standing water level point 10: F128 Dam	Standing water level point 13: Old Chardonnay 6
6/11/2013	5.5	5	10.5	7.5	
19/05/2014	3	3	3.5	3.1	
10/03/2015	3.6	3.2	3	3.1	
16/09/2015	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



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

Date

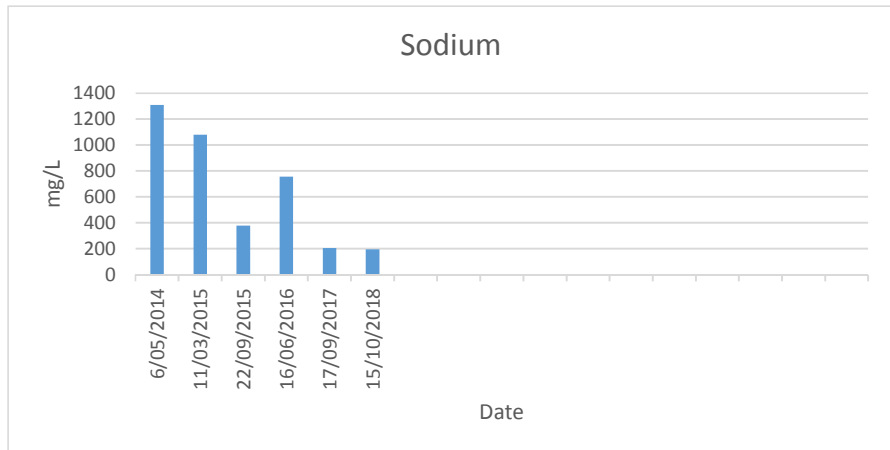
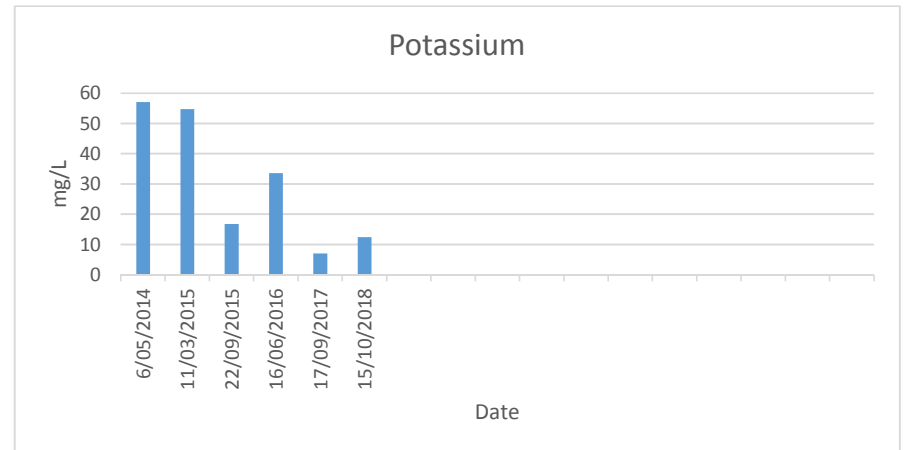
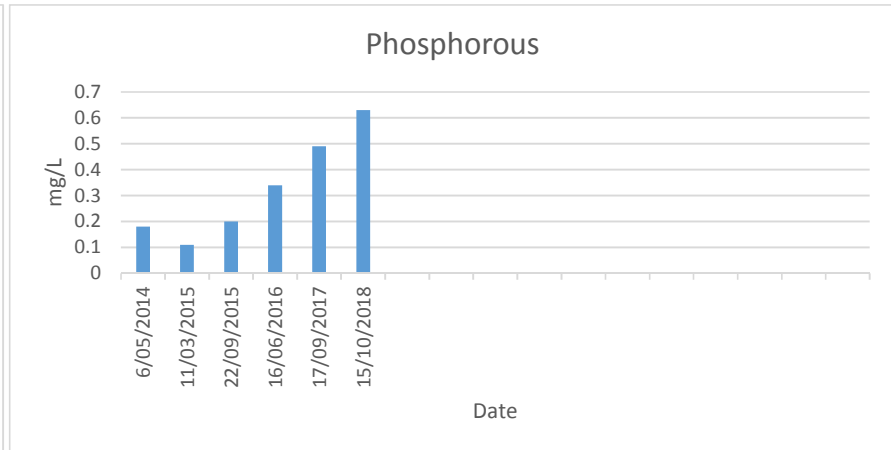
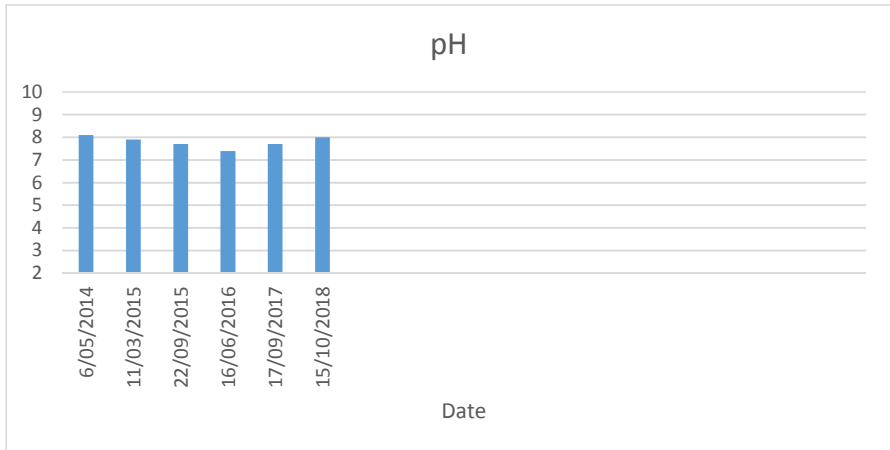
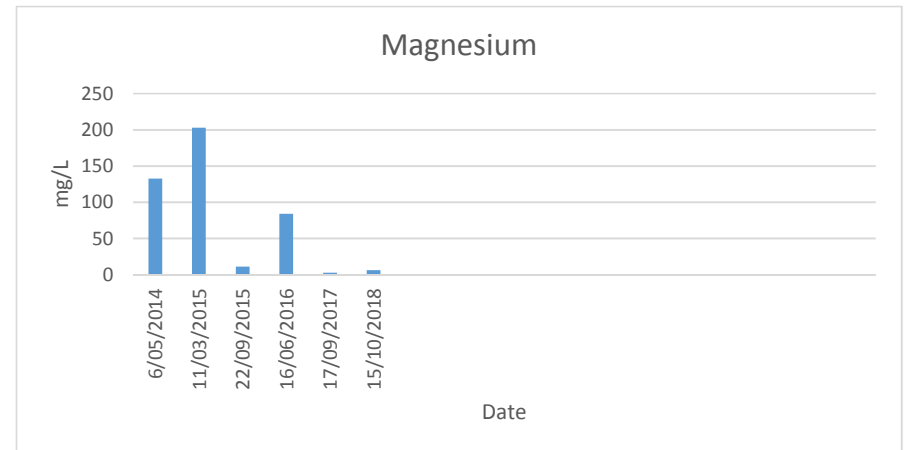
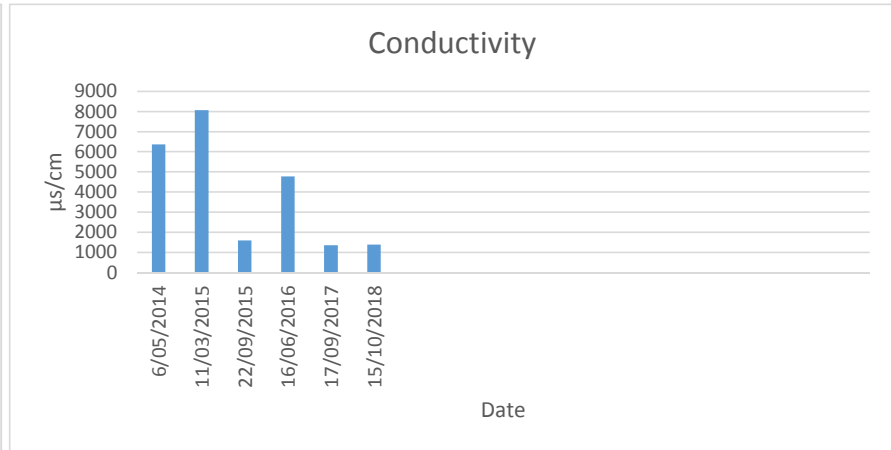
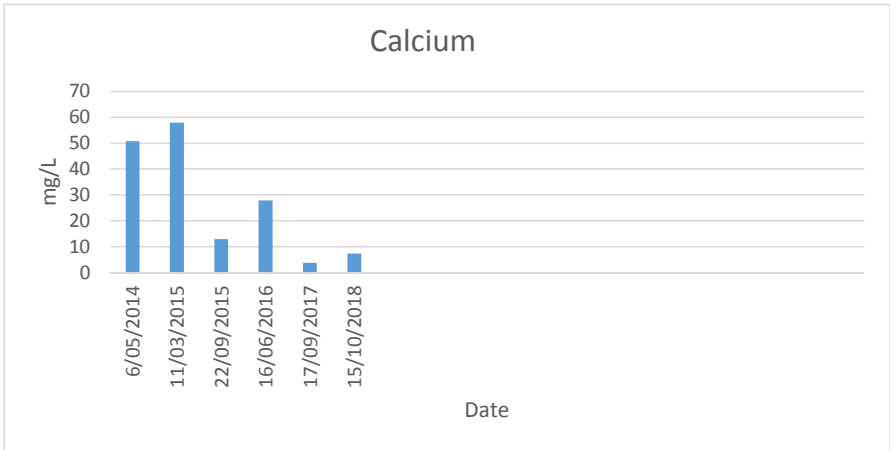
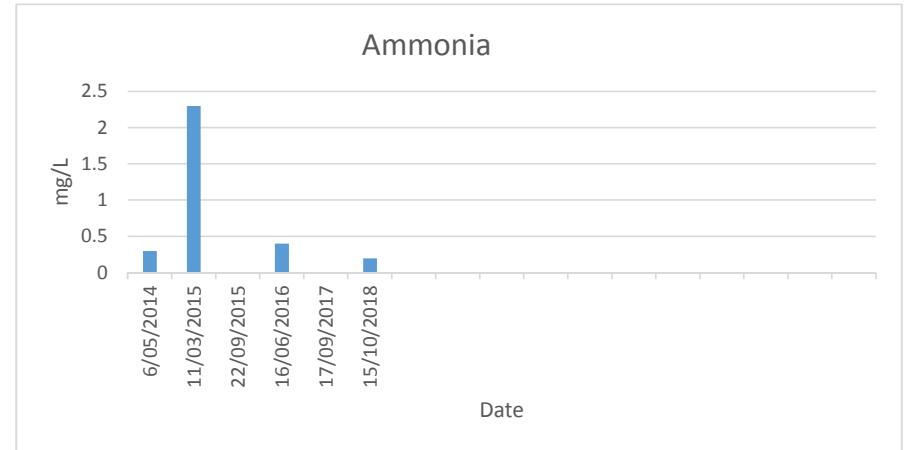
Type of Test	Name of Test	Test	Units	6/05/2014	11/03/2015	22/09/2015	16/06/2016	17/09/2017	15/10/2018											
Quality monitoring	Ammonium nitrogen	ammonia	mg/L	<0.2	1.9	<0.2	0.4	0.3	<0.1											
Quality monitoring	Calcium	Ca	mg/L	89.1	67.9	88.6	33.5	57.9	51.2											
Quality monitoring	Electrical conductivity	EC	µs/cm	1090	931	874	845	980	8580											
Quality monitoring	Magnesium	Mg	mg/L	56.5	61.5	64	24.3	32.9	217											
Quality monitoring	Nitrate nitrogen	N(nitrate)	mg/L	<0.5	<1	<0.5	<0.1	4.4	1.3											
Quality monitoring	Total nitrogen	N(total)	mg/L	2	<2	2	2	6	<2											
Quality monitoring	pH	pH	pH	7	7	7.3	7.3	7	8.3											
Quality monitoring	Phosphorus	P	mg/L	0.31	0.22	0.12	0.35	1.18	0.13											
Quality monitoring	Potassium	K	mg/L	25.6	21.8	22.9	11.1	14.9	51.3											
Quality monitoring	Sodium	Na	mg/L	43.4	54.6	48.9	85.2	24.1	557											



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

Date

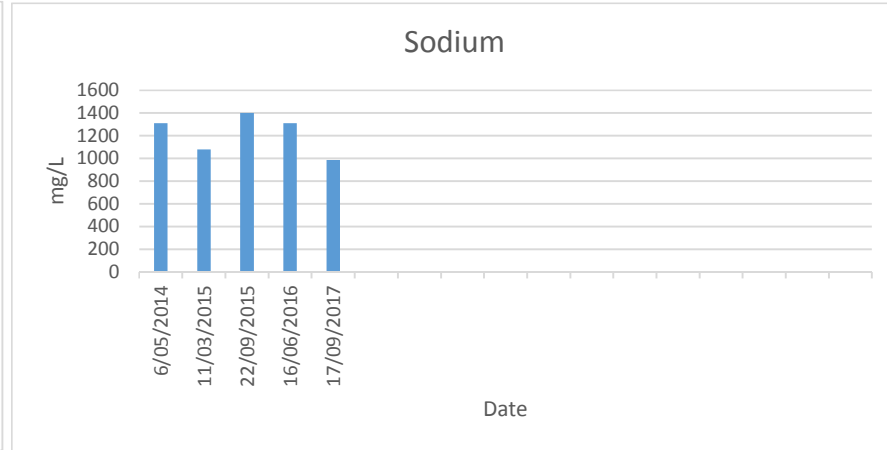
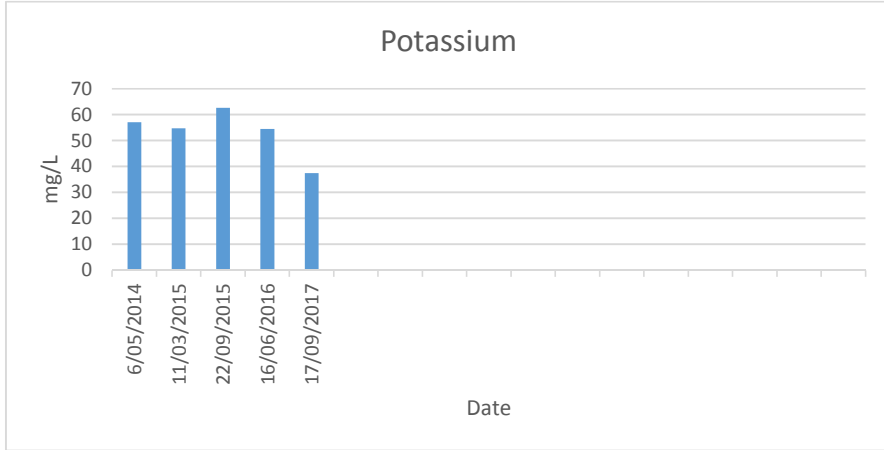
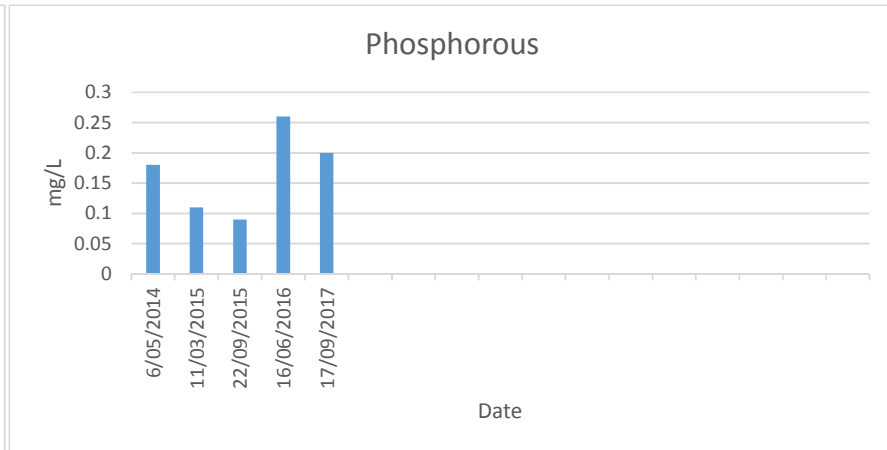
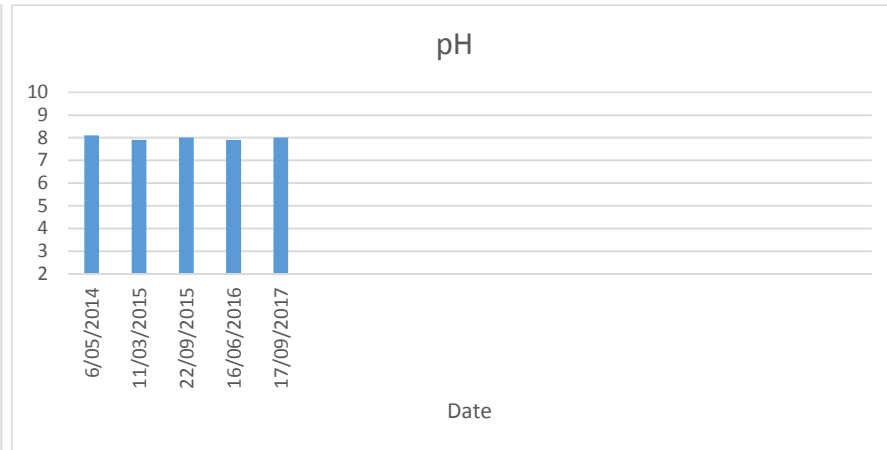
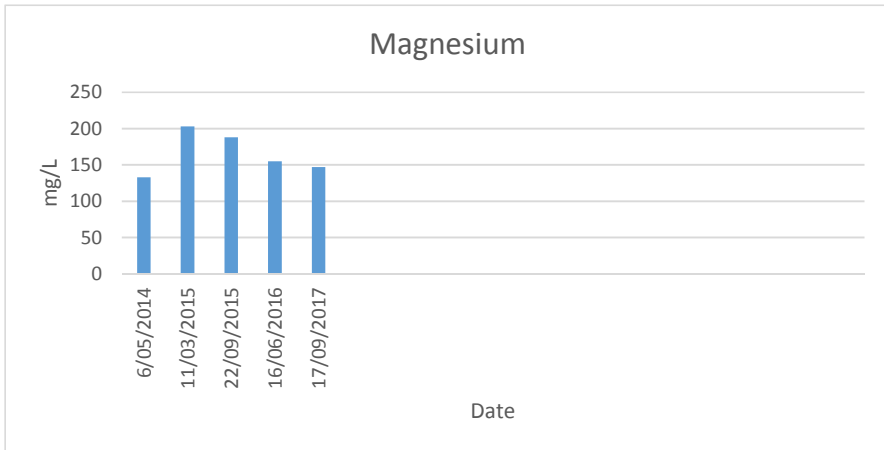
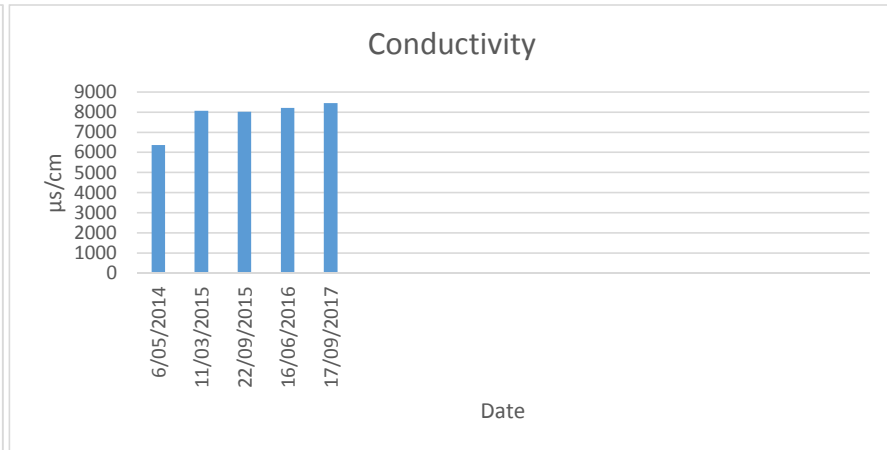
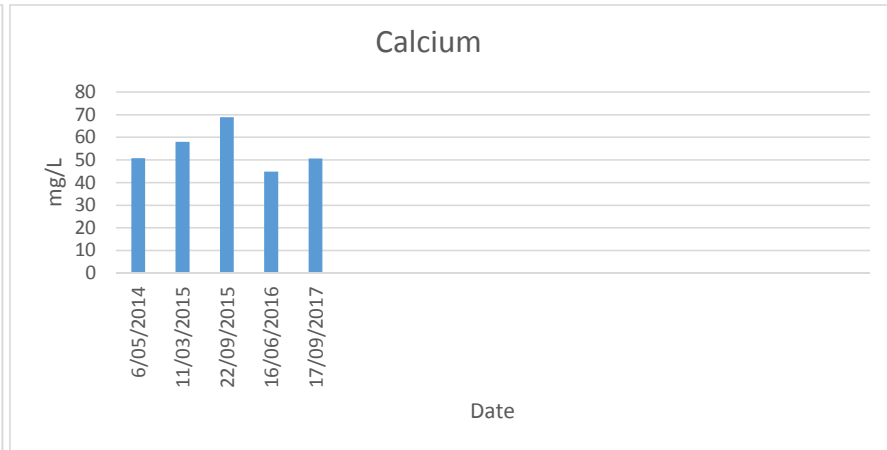
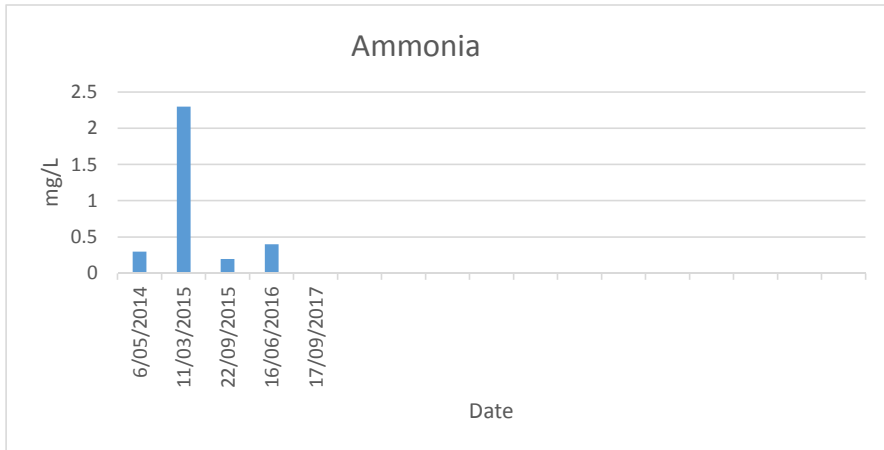
Type of Test	Name of Test	Test	Units	6/05/2014	11/03/2015	22/09/2015	16/06/2016	17/09/2017	15/10/2018											
Quality monitoring	Ammonium nitrogen	ammonia	mg/L	0.3	2.3	<0.2	0.4	<0.1	0.2											
Quality monitoring	Calcium	Ca	mg/L	50.8	58	12.9	27.9	3.81	7.37											
Quality monitoring	Electrical conductivity	EC	µs/cm	6370	8080	1600	4790	1360	1390											
Quality monitoring	Magnesium	Mg	mg/L	133	203	11.4	84	2.85	6.43											
Quality monitoring	Nitrate nitrogen	N(nitrate)	mg/L	<0.5	<1.0	<0.5	1.1	<0.1	0.2											
Quality monitoring	Total nitrogen	N(total)	mg/L	2	<2	2	3	2	5											
Quality monitoring	pH	pH	pH	8.1	7.9	7.7	7.4	7.7	8											
Quality monitoring	Phosphorus	P	mg/L	0.18	0.11	0.2	0.34	0.49	0.63											
Quality monitoring	Potassium	K	mg/L	57.1	54.8	16.8	33.6	7	12.4											
Quality monitoring	Sodium	Na	mg/L	1310	1080	380	756	206	196											



Point 9: Piezometer Water Quality Test Results Touriga SW End

Date

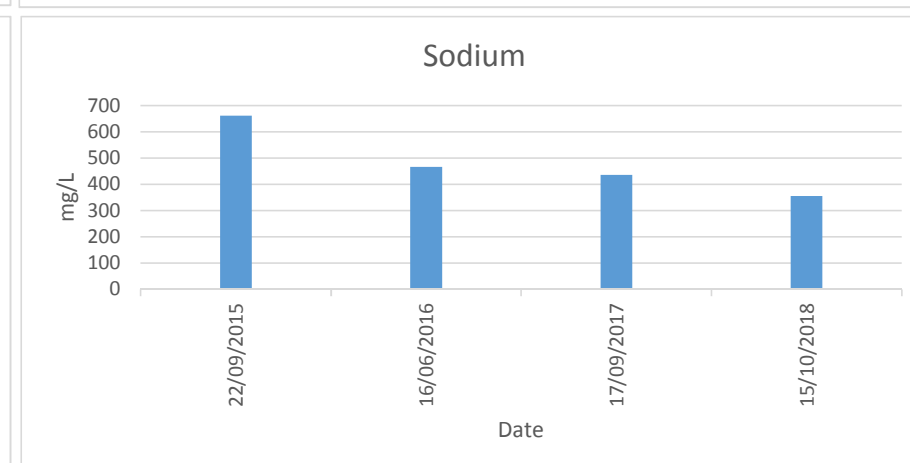
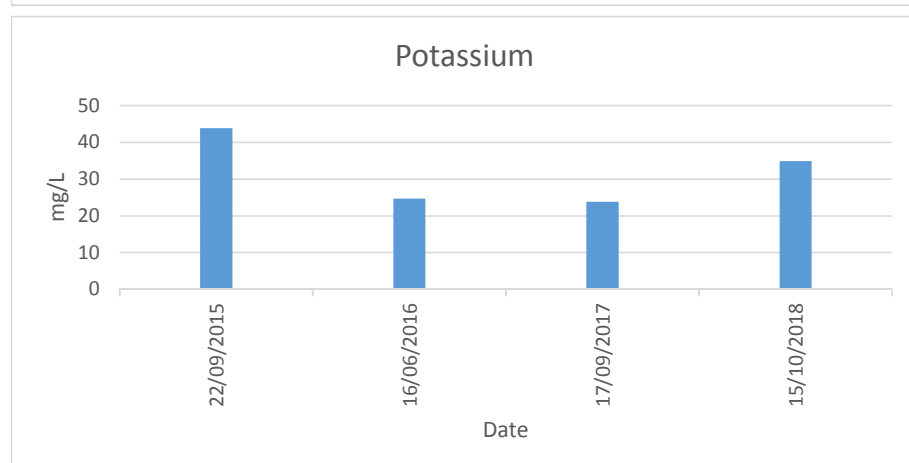
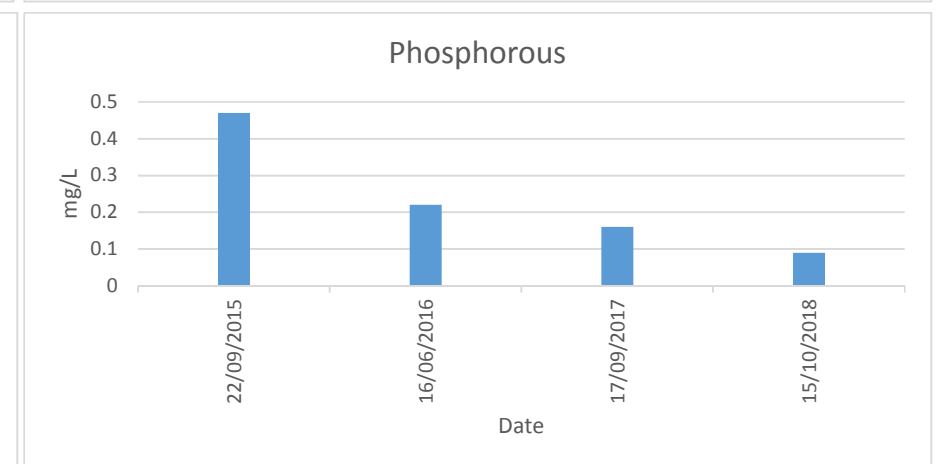
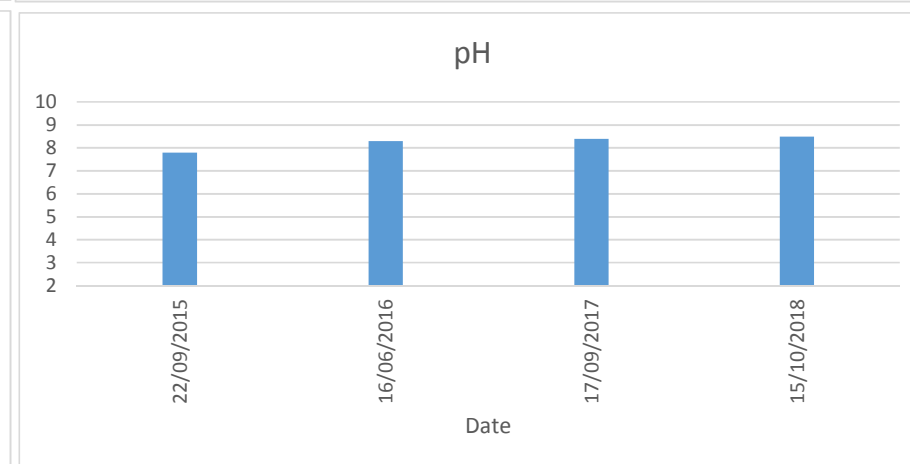
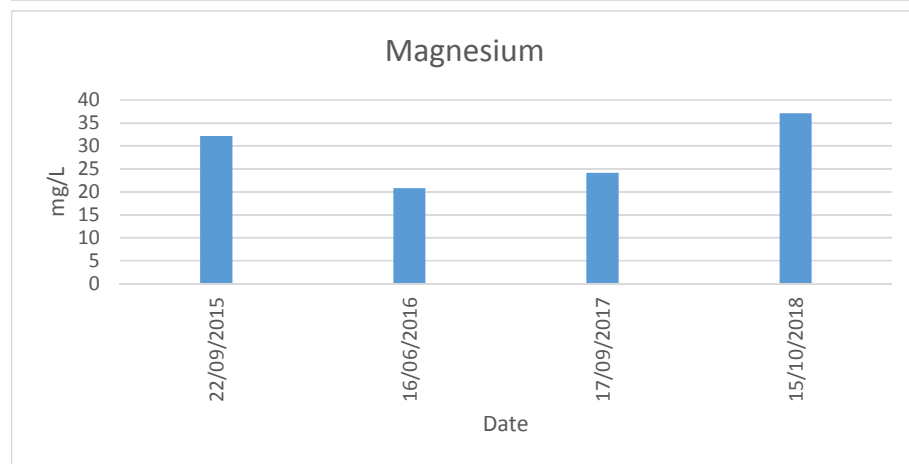
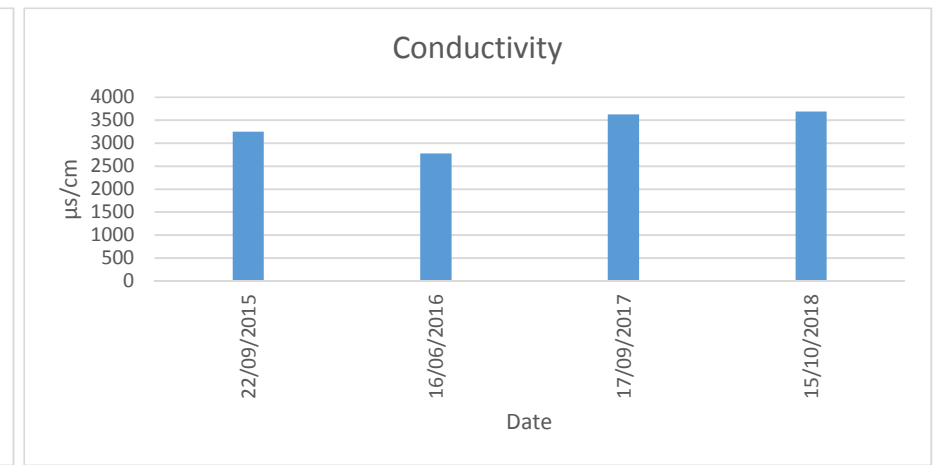
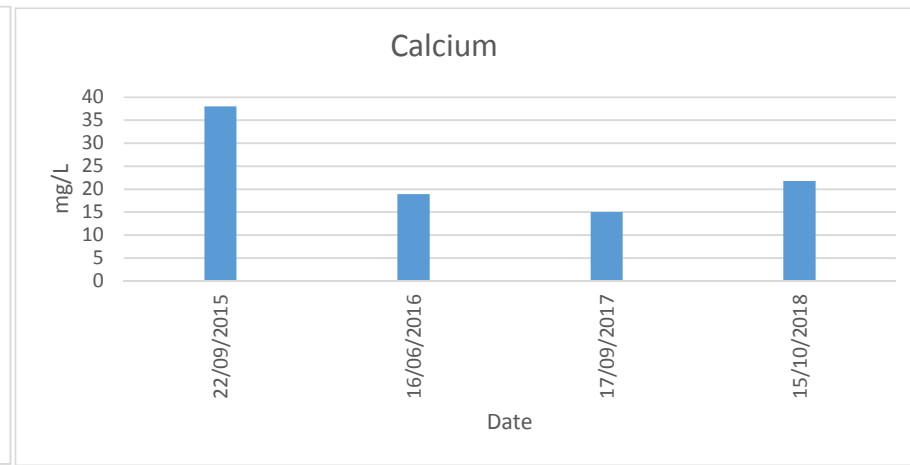
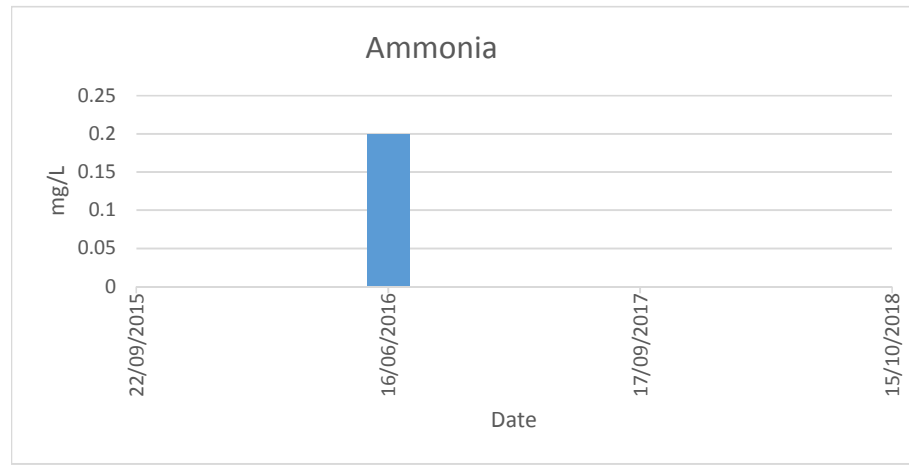
Type of Test	Name of Test	Test	Units	6/05/2014	11/03/2015	22/09/2015	16/06/2016	17/09/2017											
Quality monitoring	Ammonium nitrogen	ammonia	mg/L	0.3	2.3	0.2	0.4	<0.1											
Quality monitoring	Calcium	Ca	mg/L	50.8	58	69	44.9	50.7											
Quality monitoring	Electrical conductivity	EC	µs/cm	6370	8080	8030	8210	8450											
Quality monitoring	Magnesium	Mg	mg/L	133	203	188	155	147											
Quality monitoring	Nitrate nitrogen	N(nitrate)	mg/L	<0.5	<1	<0.5	<0.1	2.4											
Quality monitoring	Total nitrogen	N(total)	mg/L	2	<2	<2	2	2											
Quality monitoring	pH	pH	pH	8.1	7.9	8	7.9	8											
Quality monitoring	Phosphorus	P	mg/L	0.18	0.11	0.09	0.26	0.2											
Quality monitoring	Potassium	K	mg/L	57.1	54.8	62.6	54.5	37.5											
Quality monitoring	Sodium	Na	mg/L	1310	1080	1400	1310	987											



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

Date

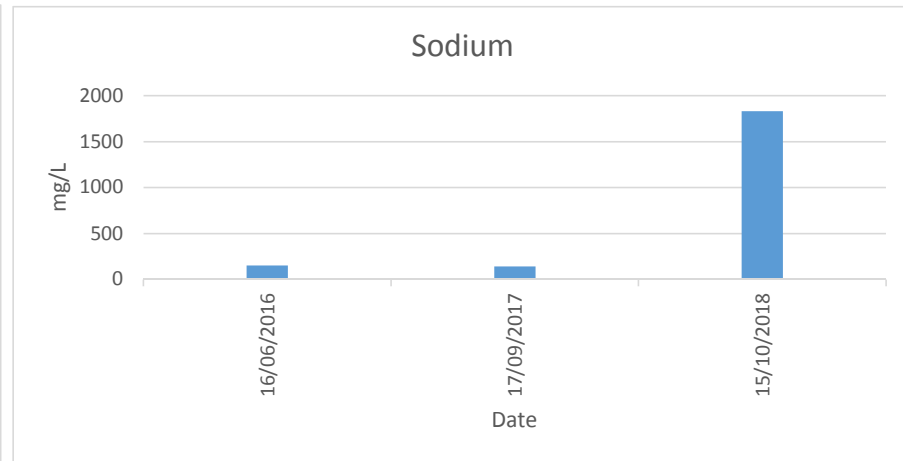
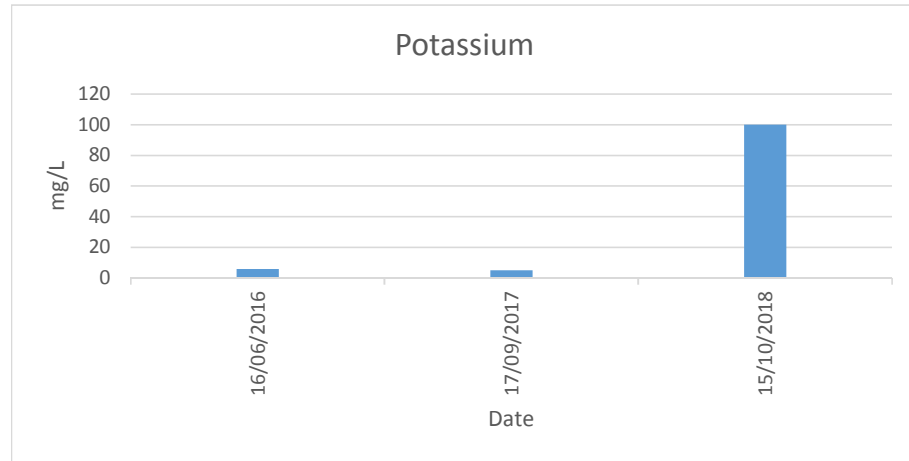
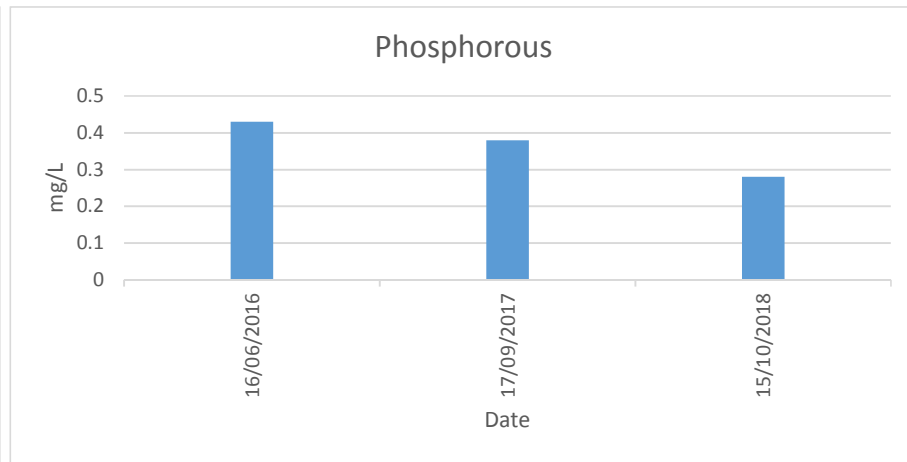
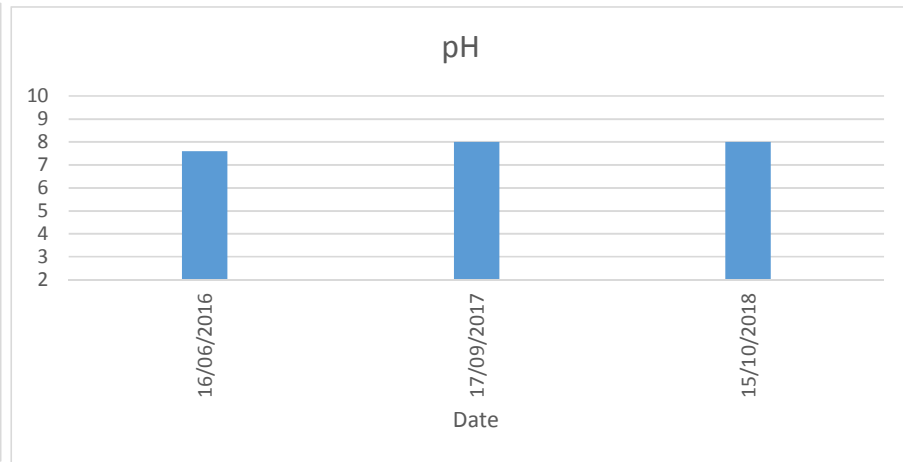
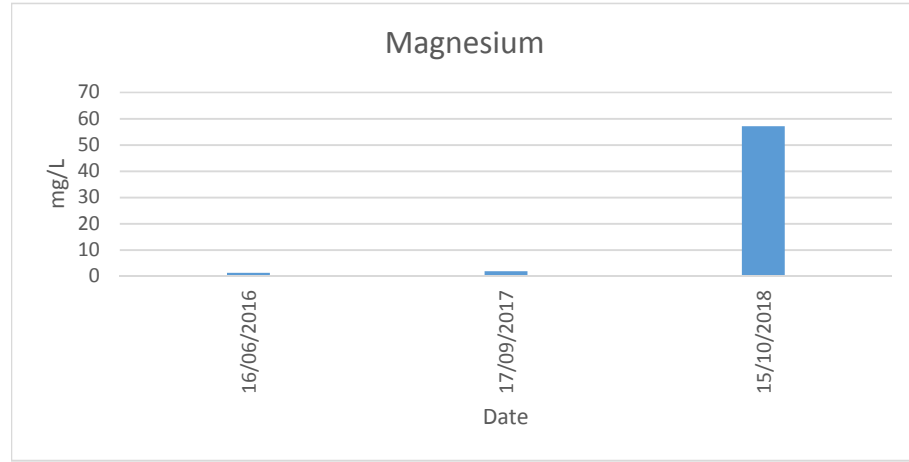
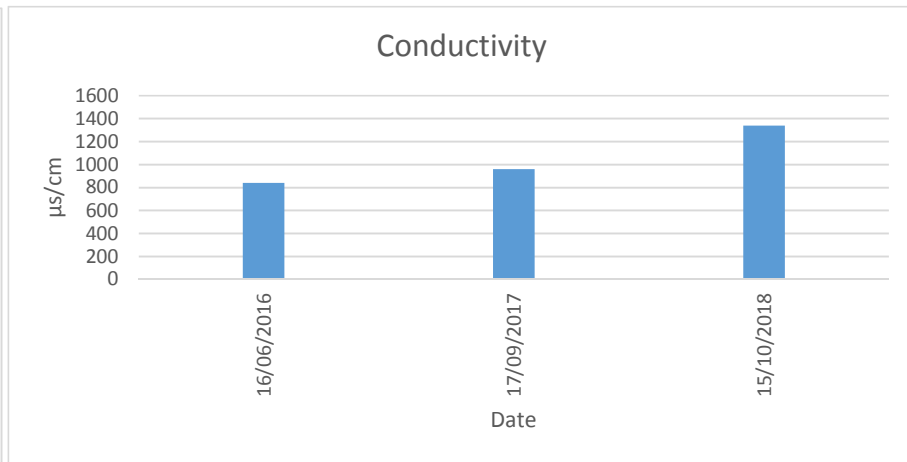
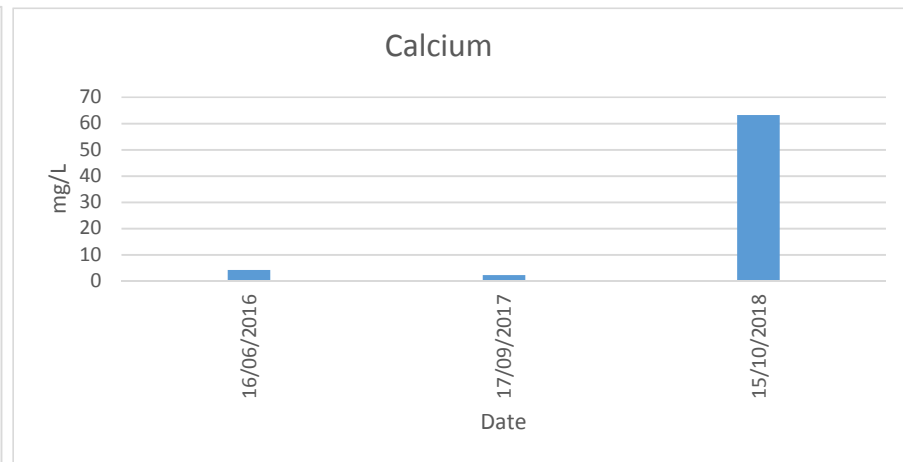
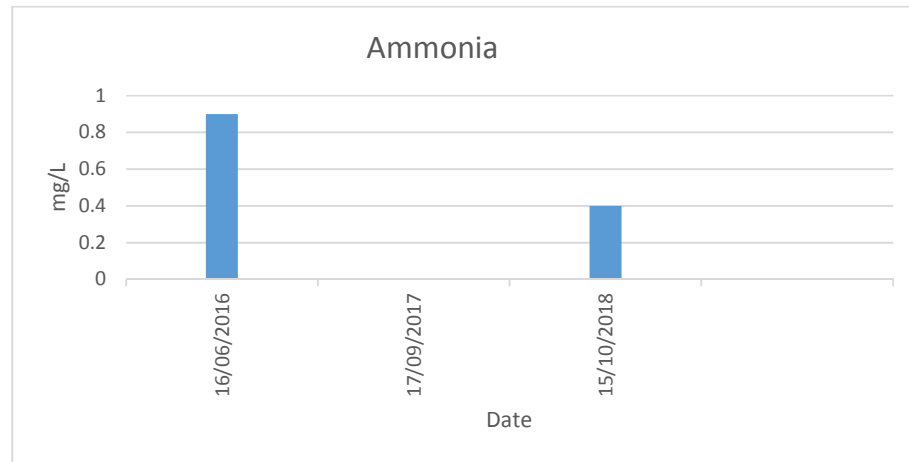
Type of Test	Name of Test	Test	units	22/09/2015	16/06/2016	17/09/2017	15/10/2018												
Quality monitoring	Ammonium nitrogen	ammonia	mg/L	<0.2	0.2	<0.1	<0.1												
Quality monitoring	Calcium	Ca	mg/L	38	18.9	15	21.8												
Quality monitoring	Electrical conductivity	EC	µs/cm	3250	2780	3630	3690												
Quality monitoring	Magnesium	Mg	mg/L	32.2	20.8	24.2	37.1												
Quality monitoring	Nitrate nitrogen	N(nitrate)	mg/L	1.6	<0.1	<0.1	0.2												
Quality monitoring	Total nitrogen	N(total)	mg/L	4	<2	<2	<2												
Quality monitoring	pH	pH	pH	7.8	8.3	8.4	8.5												
Quality monitoring	Phosphorus	P	mg/L	0.47	0.22	0.16	0.09												
Quality monitoring	Potassium	K	mg/L	43.8	24.7	23.8	34.9												
Quality monitoring	Sodium	Na	mg/L	661	466	436	355												



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

Date

Type of Test	Name of Test	Test	units	16/06/2016	17/09/2017	15/10/2018													
Quality monitoring	Ammonium nitrogen	ammonia	mg/L	0.9	<0.1	0.4													
Quality monitoring	Calcium	Ca	mg/L	4.25	2.31	63.3													
Quality monitoring	Electrical conductivity	EC	µs/cm	840	960	1340													
Quality monitoring	Magnesium	Mg	mg/L	1.37	2	57.2													
Quality monitoring	Nitrate nitrogen	N(nitrate)	mg/L	0.6	<0.1	0.1													
Quality monitoring	Total nitrogen	N(total)	mg/L	2	<2	2													
Quality monitoring	pH	pH	pH	7.6	8	8													
Quality monitoring	Phosphorus	P	mg/L	0.43	0.38	0.28													
Quality monitoring	Potassium	K	mg/L	5.6	4.8	100													
Quality monitoring	Sodium	Na	mg/L	152	140	1830													



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

Test Type	EPA Reference Points	Frequency of Monitoring	Next Sample Date
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