

Table 1 - Meteorological Data (Monthly Average)

Meteorological Information	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021
Maximum Temperature at 2m (°C)	16.6	14.1	14.3	15.0	20.5	24.3	31.0	30.1	31.7	30.1	26.1	23.1
Minimum Temperature at 2m (°C)	3.5	2.7	1.3	2.4	5.6	9.0	13.0	13.0	16.5	15.6	12.4	6.6
Average Temperature at 2m (°C)	10.3	8.6	7.9	8.9	13.1	16.8	22.4	21.8	24.3	22.9	19.2	15.1
Maximum Temperature at 10m (°C)	17.1	14.5	14.7	15.2	20.6	24.2	30.8	29.7	31.4	30.1	26.0	23.5
Minimum Temperature at 10m (°C)	6.5	5.5	3.8	5.4	8.6	11.7	15.2	14.8	17.8	17.0	14.1	9.7
Average Temperature at 10m (°C)	11.5	9.6	8.9	10.0	14.1	17.5	23.0	22.2	24.6	23.3	19.8	16.3
Total Rainfall (mm)	0.4	1.3	0.7	1.6	1.3	2.3	0.6	0.6	1.9	1.5	3.6	0.0
Average Wind Direction (degrees)	182.2	188.2	163.1	201.9	150.3	162.3	187.1	180.8	172.1	145.0	181.2	188.3
Average Wind Speed (m/s)	10.2	9.1	9.2	12.4	12.0	11.9	12.7	14.5	14.2	13.2	12.9	8.4

Table 2 - Surface Water Monitoring Results

Site	Date Sampled	General			Nutrients			
		pH (pH Units)	Electrical Conductivity (µS/cm)	Total Suspended Solids (mg/L)	Total Kjeldahl Nitrogen (mg/L)	Total Nitrogen (mg/L)	Nitrate/Nitrite as N (mg/L)	Total Phosphorus (mg/L)
<u>ANZECC Criteria Limits</u>		6.5 - 8.0	125 - 2,200	-	-	0.5	0.04	0.05
<u>OEH Water Quality Objectives</u>		6.5 - 8.5	125 - 2,200	-	-	0.5	-	0.05
Entry	14 July 2016	7.2	141	277	2	3	0.9	0.3
Freezer Room Table Drain		7.2	125	193	2	3	1.1	0.4
Farm 77 Sth Table Drain		7.3	103	657	2	3	1.1	0.3
Farm 77 Nth Table Drain		7.4	140	347	2	3	0.9	0.3
Farm 78 SE Dam		7.6	137	1,360	2	4	1.6	0.6
Farm 79 SE Dam		7.8	170	1,330	4	6	1.7	0.6
Farm 78 SW Dam		7.7	155	1,330	<2	2	2.0	0.5
Farm 79 NW Dam		7.4	140	287	2	3	1.0	0.3
Farm 78 Sediment Dam	29 September 2016	7.6	146	796	2	3	1.1	0.7
Farm 78 Swale Drain		7.8	139	2,560	2	3	1.1	1.2
Farm 79 Sediment Dam		7.4	160	230	2	7	5.3	0.9
Farm 79 Swale Drain		6.9	145	1,260	4	4	0.5	1.3
Farm 75 Roadside table	17 March 2017	7.8	133	6,160	6	7	0.9	1.7
Farm 78 Sediment Dam		7.5	213	604	2	5	2.7	0.8
Farm 79 Sediment Dam		7.7	275	89	<2	<2	0.9	0.2
Concrete batch plant table drain		7.5	230	3,350	5	5	<0.1	1.2
S1	17 June 2017	7.3	146	238	2	-	<0.5	0.2
S2		7.2	301	688	5	-	<0.5	0.2
S3		7.6	113	56	3	-	<0.5	0.1
PPU1		7.7	272	744	2	-	<0.5	0.2
PPU2		7.5	67	732	2	-	<0.5	0.3
PPU3		7.4	266	288	3	-	0.9	0.4
PPU4		7.5	246	13	2	-	3.5	0.3
PPU5		7.4	187	88	2	-	4.6	0.6
PPU1		7.8	360	116	<2	<2	0.6	<0.01

Site	Date Sampled	General			Nutrients			
		pH (pH Units)	Electrical Conductivity ($\mu\text{S}/\text{cm}$)	Total Suspended Solids (mg/L)	Total Kjeldahl Nitrogen (mg/L)	Total Nitrogen (mg/L)	Nitrate/Nitrite as N (mg/L)	Total Phosphorus (mg/L)
<u>ANZECC Criteria Limits</u>		6.5 - 8.0	125 - 2,200	-	-	0.5	0.04	0.05
<u>OEH Water Quality Objectives</u>		6.5 - 8.5	125 - 2,200	-	-	0.5	-	0.05
PPU2	28 September 2017	7.3	361	345	15	16	1.4	2.7
PPU3		7.6	327	10	3	7	3.6	0.5
PPU4		8.2	303	9	2	8	5.9	0.2
PPU1	11 January 2018	7.5	268	1,000	2	4	1.8	0.1
PPU2		7.2	213	510	9	9	0.2	0.6
PPU3		9.2	374	221	3	3	0.1	0.1
PPU4		9.1	258	218	5	5	0.1	0.3
PPU5		8.2	222	115	2	6	4.5	0.4
PPU1	5 March 2018	9.7	493	29	2	2	<0.5	0.3
PPU2		8.7	388	1,280	10	14	3.8	2.1
PPU3		8.5	729	1,660	14	14	<0.5	2.2
PPU4		8.1	514	454	10	10	<0.5	1.2
PPU5		8.2	301	87	<2	2	2.5	0.7
PPU1	3 June 2018	9.4	677	28	19	19	0.2	0.2
PPU2		7.9	479	1,100	21	21	0.3	2.8
PPU3		9.0	833	39	4	5	1.4	0.3
PPU4		8.5	456	13	2	3	0.9	0.8
PPU5		8.3	370	129	<2	3	3.1	0.9
PPU1	4 September 2018	8.0	720	69	78	79	0.8	1.2
PPU2		7.9	389	27	79	80	1.2	1.7
PPU3		8.2	407	32	4	4	0.2	0.9
PPU4		9.0	573	390	25	25	0.4	2
PPU5		8.1	395	49	3	6	3	1.1
PPU1	18 December 2018	7.0	708	12	4	4	<0.5	0.6
PPU2		7.2	388	117	5	5	<0.5	1.6
PPU3		7.2	701	106	7	8	0.5	1.2
PPU4		7.6	411	15	2	2	<0.5	1.0
PPU5		8.6	482	21	2	3	0.8	0.7

Site	Date Sampled	General			Nutrients			
		pH (pH Units)	Electrical Conductivity (µS/cm)	Total Suspended Solids (mg/L)	Total Kjeldahl Nitrogen (mg/L)	Total Nitrogen (mg/L)	Nitrate/Nitrite as N (mg/L)	Total Phosphorus (mg/L)
<u>ANZECC Criteria Limits</u>		6.5 - 8.0	125 - 2,200	-	-	0.5	0.04	0.05
<u>OEH Water Quality Objectives</u>		6.5 - 8.5	125 - 2,200	-	-	0.5	-	0.05
PPU1	19 March 2019	8.3	862	129	6	6	<1	0.6
PPU2		7.4	447	1,220	18	18	<1	3.7
PPU3		7.9	249	330	46	46	<1	0.5
PPU4		7.4	434	11	2	2	<1	0.7
PPU5		7.4	636	55	7	7	<1	1.0
PPU1	19 June 2019	7.6	271	-	3	3	<0.5	0.4
PPU2		7.4	253	-	3	3	<0.5	0.4
PPU3		7.4	202	-	5	8	2.8	1.4
PPU4		7.7	318	-	<2	<2	<0.5	0.6
PPU5		8.0	400	-	4	5	0.6	0.7
SW		6.9	366	-	3	3	<0.5	0.2
PPU1	19 September 2019	7.2	293	124	5	5	<1	0.2
PPU2		7.0	317	677	6	20	14	0.2
PPU3		7.5	268	301	4	6	2	0.6
PPU4		7.5	397	54	4	11	7	2.4
PPU5		7.4	410	45	4	8	4	1.8
PPU1	3 December 2019	7.1	429	242	3	5	1.8	0.9
PPU2		7.4	409	946	9	9	<0.1	2.7
PPU3		7.4	413	309	6	7	1.1	2.1
PPU4		7.4	525	643	8	8	<0.1	2.4
PPU5		7.5	465	94	<2	<2	0.9	0.7
PPU1	20 March 2020	6.6	368	135	3	4	0.6	0.5
PPU2		6.6	211	37	5	5	<0.1	1.2
PPU3		6.8	242	26	2	2	0.5	0.8
PPU4		7.2	215	19	3	3	<0.1	1.2
PPU5		7.3	415	59	2	2	0.3	0.8
PPU1	12 June 2020	6.9	308	4	2	2	<1	0.6
PPU2		6.7	192	121	4	6	2	1.0
PPU3		6.7	243	74	4	5	1	1.2
PPU4		6.8	253	21	2	2	<1	0.6
PPU5		7.2	294	56	5	6	1	0.7

Site	Date Sampled	General			Nutrients			
		pH (pH Units)	Electrical Conductivity (µS/cm)	Total Suspended Solids (mg/L)	Total Kjeldahl Nitrogen (mg/L)	Total Nitrogen (mg/L)	Nitrate/Nitrite as N (mg/L)	Total Phosphorus (mg/L)
<u>ANZECC Criteria Limits</u>		6.5 - 8.0	125 - 2,200	-	-	0.5	0.04	0.05
<u>OEH Water Quality Objectives</u>		6.5 - 8.5	125 - 2,200	-	-	0.5	-	0.05
PPU1	19 November 2020	7.5	327	444	3	3	<0.1	0.2
PPU2		7.5	265	144	6	6	<0.1	0.9
PPU3		8.4	266	49	5	5	<0.1	0.5
PPU4		8.1	356	64	4	4	0.4	1.5
PPU5		7.9	338	60	4	6	1.8	1.0
PPU1	14 April 2021	7.2	214	9	<2	<2	<0.1	<0.01
PPU2		7.2	173	132	6	6	<0.1	0.59
PPU3		7.2	271	102	5	6	1.3	0.55
PPU4		7.2	205	80	4	4	<0.1	0.98
PPU5		7.5	215	37	3	3	0.4	<0.01
MIN		6.6	67	4	2	2	0.1	0.01
MAX		9.7	862	6160	79	80	14	3.7
AVERAGE		7.6	329.2	438.8	6.7	8.1	1.4	0.9

Green - exceeds the upper ANZECC Criteria Limits

Orange - exceeds the lower OEH Water Quality Objectives criteria limit

Table 3 - Shallow Aquifer Piezometer Groundwater Monitoring Results (Shepparton Formation)

Piezo ID	Date	General Parameters			Major Ions								Nutrients			Misc
		pH	Electrical Conductivity	Total Dissolved Solids	Sodium	Calcium	Potassium	Magnesium	Chloride	Sulphate	Carbonate as CaCO ₃	Bicarbonate as CaCO ₃	Ammonia as N	Nitrate as N	Phosphorus	Total organic carbon
		-	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
<u>ANZECC Guidelines</u>		6.5 - 8.5	-	1,200	180	-	-	-	250	250	200	200	0.5	50	-	-
Piezo 1 Deep	Apr 2016	7.1	253	215	39	8.7	3	4.7	13	<5	<2	116	<0.1	<1	0.11	11
	Oct 2016	7.2	190	148	33.3	4.4	2.3	3.2	13.3	<5	<2	167	<0.1	<1	0.04	0.7
	Mar 2017	7.1	190	135	31.6	4.8	1.1	3.7	15.6	4.6	<2	91	<0.1	<0.1	0.16	4.4
	Jun 2017	7	181	152	24.8	5.3	0.8	2.7	11.6	2.5	<2	76	<0.1	<0.5	0.01	0.6
	Sep 2017	7.2	186	133	24.6	4.7	1.6	4	11.5	<2.5	<2	76	1.1	<0.5	<0.01	0.7
	Jan 2018	7.5	196	79	26.6	4.2	1.4	4	18.3	8	<2	75	<0.1	<0.5	<0.01	0.5
	Mar 2018	9.1	191	140	30.9	5.2	1.6	2.9	12	9.3	<2	-	<0.1	<1	0.09	1
	Jun 2018	7.4	191	141	27.7	2.7	0.6	2.2	20.8	3.8	-	77	<0.1	<0.1	0.09	<0.5
	Sep 2018	7.5	182	119	31	2.6	2	0.7	11.6	4.1	<2	80	<0.1	<0.5	0.11	0.7
	Dec 2018	8.2	244	137	38.8	4.7	1.2	3.9	14.9	4.8	<2	76	<0.1	<0.5	0.09	0.9
	Mar 2019	7.7	200	170	36.5	2.8	2.1	2.3	20	5.9	<2	369	0.3	<1	0.18	0.6
	Jun 2019	8.1	175	149	39.6	5.1	1.7	2.8	11.2	3.2	-	77	22	<0.5	0.19	0.7
	Sep 2019	7.5	189	142	40.8	3.9	1.7	2.3	13	6	<2	81	<0.1	<1	<0.01	0.8
	Dec 2019	7.7	186	149	30.1	5.5	1.7	2.6	11.2	4.5	<2	-	<0.1	<0.1	<0.01	<0.5
	Mar 2020	6.8	183	124	28.8	3.8	0.9	3.0	16.3	2.7	<2	-	2.5	0.1	0.03	<0.5
	Jun 2020	7.4	190	191	29.4	2.8	0.9	3.2	7.8	1.9	<2	83	0.2	<1	0.06	<0.5
	Nov 2020	7.8	283	130	32.0	3.12	1.1	3.0	13.0	11.2	<2	-	<0.1	<1	<0.01	0.9
Apr 2021	7.3	193	178	39.7	3.44	2.2	2.89	9.6	2.8	<2	82	<0.1	<1	<0.01	<0.5	
	Avg	7.5	200.2	146.2	32.5	4.4	1.6	3.0	13.6	4.9	<2	109.0	1.5	0.6	0.07	1.4
Piezo 2 Deep	Apr 2016	7.1	305	220	49	9.2	3.4	5.7	22	<5	<2	122	<0.1	<1	0.12	5
	Oct 2016	6.9	179	141	17.2	-	1.1	3.5	69.1	-	<2	71	<0.1	<0.5	0.08	<0.5
	Mar 2017	7.2	276	172	48.7	5.9	1.3	4.6	19.2	5.5	<2	126	<0.1	<0.1	0.02	0.8
	Jun 2017	7	266	190	36.8	7.9	1.6	4.3	16.4	4.1	<2	110	<0.1	<0.5	0.05	1.4
	Sep 2017	7.1	269	200	35.4	6.9	1.7	5.6	20.5	4.8	<2	104	0.3	<0.5	<0.01	0.8
	Jan 2018	7.3	293	205	35.6	6.9	1.9	5.3	24.9	6.9	<2	104	<0.1	<0.5	<0.01	0.8
	Mar 2018	8.5	281	204	45.5	7.7	2.4	4.8	19	11.2	<2	-	<0.1	<1	0.04	0.8
	Jun 2018	7.2	271	193	38.7	4.4	1	3.7	12.5	2.4	-	105	<0.1	<0.1	0.12	<0.5
Sep 2018	7.3	283	200	48.8	3.6	2.8	1.8	21.1	6.4	<2	111	<0.1	<0.5	0.08	0.7	

Piezo ID	Date	General Parameters			Major Ions								Nutrients			Misc
		pH	Electrical Conductivity	Total Dissolved Solids	Sodium	Calcium	Potassium	Magnesium	Chloride	Sulphate	Carbonate as CaCO ₃	Bicarbonate as CaCO ₃	Ammonia as N	Nitrate as N	Phosphorus	Total organic carbon
		-	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
<u>ANZECC Guidelines</u>		6.5 - 8.5	-	1,200	180	-	-	-	250	250	200	200	0.5	50	-	-
	Dec 2018	8	301	191	48.7	6.4	1.6	4.8	17.6	5.8	<2	104	<0.1	<0.5	0.06	0.8
	Mar 2019	7.5	275	222	49.9	4.8	2.6	3.6	18	6.1	<2	110	<0.1	<1	0.09	<0.5
	Jun 2019	7.4	271	204	52	6.9	2	4.7	19.3	4.1	-	108	34	<0.5	0.09	0.6
	Sep 2019	7.3	281	219	61.1	6.5	2.8	4.5	19	7	<2	115	<0.1	<1	<0.01	0.8
	Dec 2019	7.3	272	196	43.2	5.8	2.3	4.8	18.2	6.1	<2	-	<0.1	0.2	<0.01	<0.5
	Mar 2020	6.8	264	180	37.5	5.6	1.7	4.3	16.3	3.1	<2	-	<0.1	0.2	0.04	0.5
	Jun 2020	7.2	277	205	46.2	5.2	1.2	4.7	14.8	2.3	<2	112	<0.1	<1	<0.01	<0.5
	Nov 2020	7.6	294	188	46.0	5.90	1.6	4.9	22.8	14.5	<2	-	<0.1	1	<0.01	1.0
	Apr 2021	7.2	280	198	60.3	6.44	3.4	4.99	15.4	4.0	<2	116	<0.1	2	<0.01	0.6
	Avg	7.3	274.3	196.0	44.5	6.3	2.0	4.5	21.5	5.8	<2	108.4	2.0	0.7	0.05	1.0
Piezo 3 Deep	Apr 2016	7.2	278	194	41	11.4	4.9	6.7	17	<5	<2	131	<0.1	<1	0.35	5.9
	Oct 2016	6.8	224	154	31.2	7.3	2.8	5.6	21.1	9	<2	74	<0.1	<1	0.03	6.5
	Mar 2017	7	182	132	27.2	5.7	1.2	4.6	14	3.4	<2	72	<0.1	0.1	0.09	0.7
	Jun 2017	7.4	192	165	21.9	7.9	1.8	4.7	13.1	2.5	<2	76	<0.1	<0.5	0.09	0.8
	Sep 2017	7.2	182	157	19.2	6.7	1.6	5.4	13.2	<2.5	<2	70	1.3	<0.5	<0.01	0.6
	Jan 2018	7.2	182	117	18.2	6.6	1.8	5.2	13.4	6.1	<2	66	<0.1	<0.5	<0.01	0.7
	Mar 2018	8.3	182	122	22	6.7	1.8	4	14	7.5	<2	-	<0.1	<1	0.06	0.5
	Jun 2018	7.1	180	139	21.7	5.1	1.1	4.1	15.6	2.8	-	65	0.1	<0.1	0.13	<0.5
	Sep 2018	7.2	181	124	20.8	3.2	2.3	1.5	13.6	3.6	<2	70	<0.1	<0.5	0.1	0.6
	Dec 2018	8	177	137	25	5.9	1.4	4.6	12.6	3.8	<2	65	<0.1	<0.5	0.07	0.6
	Mar 2019	7.4	189	161	27.2	4.6	2.6	3.4	13	4.1	<2	71	0.1	<1	<0.01	0.6
	Jun 2019	7.2	174	149	29.3	7.3	2.6	5.1	12.6	3	-	66	0.1	<0.5	0.14	0.6
	Sep 2019	7.2	173	137	30.2	5.8	2.3	3.9	13	<5	<2	70	<0.1	<1	<0.01	0.5
	Dec 2019	7.3	174	134	21.6	5.4	2.1	4.1	12.8	3.9	<2	-	<0.1	0.1	<0.01	<0.5
	Mar 2020	6.8	168	114	18.6	5.1	1.3	4.0	7.6	1.9	<2	-	0.1	0.2	<0.01	<0.5
	Jun 2020	7.0	169	138	21.5	4.5	1.1	4.5	10.7	1.1	<2	71	<0.1	<1	0.03	<0.5
Nov 2020	7.4	534	128	23.0	5.31	1.4	4.2	11.9	10.0	<2	-	<0.1	<1	<0.01	0.7	
Apr 2021	7.1	193	149	32.1	6.56	3.1	4.68	12.5	<2.5	<2	73	<0.1	<1	<0.01	0.6	

Piezo ID	Date	General Parameters			Major Ions								Nutrients			Misc
		pH	Electrical Conductivity	Total Dissolved Solids	Sodium	Calcium	Potassium	Magnesium	Chloride	Sulphate	Carbonate as CaCO ₃	Bicarbonate as CaCO ₃	Ammonia as N	Nitrate as N	Phosphorus	Total organic carbon
		-	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
<u>ANZECC Guidelines</u>		6.5 - 8.5	-	1,200	180	-	-	-	250	250	200	200	0.5	50	-	-
	Avg	7.3	207.4	141.7	25.1	6.2	2.1	4.5	13.4	4.3	<2	74.3	0.2	0.6	0.07	1.2
Piezo 4 Deep	Apr 2016	7.3	590	716	100	17.4	7.2	12.9	50	7	<2	248	<0.1	<1	2.35	11
	Oct 2016	6.7	250	188	24.6	-	2	5.9	13	-	<2	192	<0.1	<0.5	0.07	0.9
	Mar 2017	7	566	372	96	17.6	8.5	15.5	57.6	10.2	<2	210	0.5	<0.1	1.85	2
	Jun 2017	7	618	405	87.5	21	3.4	12.1	53	8.2	<2	242	<0.1	<0.5	1.13	1.6
	Sep 2017	6.9	600	341	79.4	17.1	3.9	14.6	60.2	10.2	<2	212	<0.1	<0.5	0.94	1
	Jan 2018	7	554	355	71.8	14.9	3.1	11.7	58.9	8.7	<2	183	<0.1	<0.5	0.17	1
	Mar 2018	7.9	538	307	80.6	23.1	3.9	14.1	58	27.7	<2	-	<0.1	<1	0.69	0.6
	Jun 2018	7	469	353	67.5	9.4	2.2	7.5	55.4	8.4	-	146	2	0.3	1.11	<0.5
	Sep 2018	7.2	481	245	80	7.5	5.8	6.9	56.3	9.8	<2	155	1.8	<0.5	0.93	0.7
	Dec 2018	7.7	460	317	78.7	11.3	2.6	8.4	52.8	9.9	<2	141	0.1	<0.5	1.71	0.7
	Mar 2019	7.6	427	288	84.3	9.5	7.8	7.2	56	10.7	<2	133	0.7	<1	1.27	0.5
	Jun 2019	7	489	303	93.3	15.4	6.3	11.8	54.3	12.7	-	165	0.6	<0.5	2.39	0.8
	Sep 2019	7.2	526	378	114	15.6	5.8	11.3	62	10	<2	178	<0.1	<1	<0.01	0.9
	Dec 2019	7.1	526	324	80.8	14.3	5.3	101	52.9	10.8	<2	-	1.0	<0.1	3.15	1.3
	Mar 2020	6.7	505	343	72.1	14.8	8.0	90.6	60.6	6.0	<2	-	4.6	0.3	0.45	2.4
	Jun 2020	6.9	501	337	85.4	12.6	3.4	29.3	52.2	5.7	<2	173	0.4	1	0.16	0.9
Nov 2020	7.0	585	387	79.0	16.30	2.1	35.0	92.3	12.5	<2	-	<0.1	<1	0.27	1.6	
Apr 2021	6.9	586	363	118	18.9	-	10.8	85.5	-	<2	142	<0.1	<1	<0.01	0.6	
	Avg	7.1	515.1	351.2	82.9	15.0	4.8	22.6	57.3	10.5	<2	180	0.7	0.6	1.10	1.6
Piezo 4 Shallow	Nov 2020	7.1	555	301	67.0	-	7.1	17.0	90.1	14.1	<2	-	1.7	1	0.58	1.7
	Avg	7.1	555.0	301.0	67.0	-	7.1	17.0	90.1	14.1	<2	-	1.7	1.0	0.58	1.7
Piezo 5 Deep	Apr 2016	6.9	273	214	37	11.7	3.3	7.9	12	<5	<2	122	<0.1	<1	0.07	2.2
	Oct 2016	6.7	178	139	17.7	-	1.2	3.7	13.7	-	<2	68	<0.1	<0.5	0.08	<0.5
	Mar 2017	6.9	246	174	38.7	9.3	1.8	7.1	15.2	5.4	<2	108	<0.1	0.1	0.07	1.2
	Jun 2017	6.9	236	184	26.3	10.5	1.2	5.9	11.9	2.5	<2	105	<0.1	<0.5	0.03	1
	Sep 2017	6.6	239	190	25.1	9.3	1.7	7.5	12.9	3	<2	103	<0.1	<0.5	<0.01	0.6
	Jan 2018	7	241	191	23.5	9.2	1.8	6.9	12.5	6.3	<2	100	<0.1	<0.5	<0.01	0.7

Piezo ID	Date	General Parameters			Major Ions								Nutrients			Misc
		pH	Electrical Conductivity	Total Dissolved Solids	Sodium	Calcium	Potassium	Magnesium	Chloride	Sulphate	Carbonate as CaCO ₃	Bicarbonate as CaCO ₃	Ammonia as N	Nitrate as N	Phosphorus	Total organic carbon
		-	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
<u>ANZECC Guidelines</u>		6.5 - 8.5	-	1,200	180	-	-	-	250	250	200	200	0.5	50	-	-
Piezo 5	Mar 2018	7.8	234	79	30.1	9.8	2	6	13	17.9	<2	-	<0.1	<1	0.03	<0.5
	Jun 2018	6.9	234	162	28.6	7.5	1.2	5.8	15.2	3.2	-	98	0.1	0.1	0.13	<0.5
	Sep 2018	7	266	190	35.8	5	3.1	3.5	17.8	7.2	<2	108	0.8	<0.5	0.12	0.9
	Dec 2018	7.6	232	168	32.8	9.2	1.5	6.7	11.2	4.1	<2	100	<0.1	<0.5	0.05	0.6
	Mar 2019	7.5	272	220	43.1	7.7	2.6	5.4	21	8.4	<2	104	<0.1	<1	0.08	0.5
	Jun 2019	6.7	236	171	35.7	9.6	2.2	6.3	13.3	4.4	-	100	<0.1	<0.5	0.16	1
	Sep 2019	7.1	238	173	42.2	9.2	2.7	5.9	14	<5	<2	102	<0.1	<1	<0.01	0.9
	Dec 2019	7.0	232	171	28.8	8.2	2.3	6.2	12.1	4.9	<2	-	<0.1	0.1	0.05	0.7
	Mar 2020	6.7	253	172	28.1	8.1	1.4	7.1	11.5	4.9	<2	-	<0.1	0.2	0.04	0.6
	Jun 2020	6.8	241	203	30.3	7.8	1.3	6.8	9.6	2.4	<2	107	0.1	<1	0.04	0.5
	Nov 2020	7.0	242	156	30.0	8.54	1.5	6.5	10	<2.5	<2	-	<0.1	<1	<0.01	0.9
	Apr 2021	6.9	236	195	40	9.26	2.9	6.49	10.8	2.6	<2	107	<0.1	<1	<0.01	<0.5
	Avg	7.0	240.8	173.9	31.4	8.8	1.9	6.2	13.3	5.4	<2	102.3	0.1	0.6	0.06	0.8
Piezo 6 Deep	Apr 2016	7	409	276	56	18.5	4.8	11.5	35	<5	<2	210	<0.1	<1	0.15	5.2
	Oct 2016	6.6	252	179	24.8	-	2	6.1	12.6	-	<2	140	0.2	<0.5	0.09	1.1
	Mar 2017	6.8	347	271	50.6	13	2.3	9.2	36.1	6	<2	119	<0.1	0.2	0.08	1.1
	Jun 2017	6.8	326	206	35.8	12	1.4	7.2	32.1	3.8	<2	112	<0.1	<0.5	<0.01	<0.5
	Sep 2017	6.7	391	253	43.7	13.4	3.2	11.2	43.6	8.2	<2	122	1	<0.5	<0.01	1.1
	Jan 2018	6.8	360	269	37.3	12.6	2.4	9.8	41	7.2	<2	109	<0.1	<0.5	<0.01	0.6
	Mar 2018	7.5	347	213	43	12.9	2.5	8.1	38	15	<2	-	<0.1	<1	0.02	<0.5
	Jun 2018	6.8	332	188	36.6	10.2	1.4	7.2	28.9	3.1	-	109	0.1	0.1	0.13	<0.5
	Sep 2018	7	339	174	45.6	7.5	3.1	5.9	37.8	6.6	<2	114	<0.1	<0.5	0.1	0.8
	Dec 2018	6.8	338	218	45.9	13	1.9	8.9	35	6.7	<2	109	<0.1	<0.5	0.07	0.8
	Mar 2019	7	344	240	48.3	10.4	3	6.3	36	7.1	<2	107	<0.1	<1	0.13	0.5
	Jun 2019	6.8	339	237	60.7	14.7	2.9	10.9	35.5	5.8	-	100	0.9	<0.5	0.12	0.7
	Sep 2019	7	338	220	56.9	12.6	2.9	8.3	43	<5	<2	111	<0.1	<1	<0.01	0.7
	Dec 2019	6.9	329	212	41.5	11.3	2.7	7.9	38.8	6.4	<2	-	0.4	0.2	0.03	<0.5
Mar 2020	6.6	319	217	34.3	10.4	1.9	7.5	29.0	3.6	<2	-	<0.1	0.3	0.24	0.6	
Jun 2020	6.8	318	226	41.5	10.3	1.6	8.1	30.0	2.6	<2	121	0.2	<1	0.04	0.5	

Piezo ID	Date	General Parameters			Major Ions								Nutrients			Misc
		pH	Electrical Conductivity	Total Dissolved Solids	Sodium	Calcium	Potassium	Magnesium	Chloride	Sulphate	Carbonate as CaCO ₃	Bicarbonate as CaCO ₃	Ammonia as N	Nitrate as N	Phosphorus	Total organic carbon
		-	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
<u>ANZECC Guidelines</u>		6.5 - 8.5	-	1,200	180	-	-	-	250	250	200	200	0.5	50	-	-
	Nov 2020	6.8	325	197	39.0	11.4	1.7	8.0	27	<2.5	<2	-	<0.1	<1	<0.01	1.0
	Apr 2021	6.7	334	200	53.2	12.9	3.8	8.29	29.8	3.5	<2	116	<0.1	2	<0.01	0.8
	Avg	6.9	338.2	222.0	44.2	12.2	2.5	8.4	33.8	5.8	<2	121.4	0.2	0.7	0.07	1.0

Orange - exceeds the upper ANZECC Criteria Limits

Table 4 - Deep Aquifer Production Bore Groundwater Monitoring Results (Calivil Formation)

Bore ID	Date	General Parameters			Major Ions								Nutrients			Misc
		pH	Electrical Conductivity	Total Dissolved Solids	Sodium	Calcium	Potassium	Magnesium	Chloride	Sulphate	Carbonate as CaCO ₃	Bicarbonate as CaCO ₃	Ammonia as N	Nitrate as N	Phosphorus	Total organic carbon
		-	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ANZECC Guidelines		6.5 - 8.5	-	1,200	180	-	-	-	250	250	200	200	0.5	50	-	-
Bore 1	Aug 2015	6.6	685	-	84.3	29.7	1.9	22	144	19	-	-	<0.1	<0.5	0.04	<0.5
	Apr 2016	6.8	149	104	14	6.7	1.9	5.1	9	<5	<2	70	<0.1	<1	0.11	<0.5
	Oct 2016	7.3	145	122	16	5.9	2	5	9.7	3.4	<2	67	<0.1	<0.1	<0.01	<0.5
	Jun 2017	6.8	149	120	12.6	7.2	0.7	4.7	8.8	2.1	<2	63	<0.1	<0.5	<0.01	<0.5
	Sep 2017	PB1 not sampled due to maintenance at the time of sampling.														
	Jan 2018	7	152	129	11.4	6.1	1.2	5.5	8.6	2.4	<2	61	<0.1	<0.5	<0.01	<0.5
	Jun 2018	6.9	154	109	22.1	4.7	1.4	5.1	14.4	1	<2	64	<0.1	<0.1	0.05	0.7
	Dec 2018	6.9	153	107	18.8	6.5	1.1	5.4	8.5	3.3	<2	61	<0.1	<0.5	0.02	<0.5
	Jun 2019	7	135	125	21.3	6.8	1.2	5.5	10.7	<2.5	-	55	<0.1	<0.5	0.12	<0.5
	Dec 2019	7.0	141	108	13.2	5.4	1.6	4.4	9.4	3.1	<2	-	<0.1	<0.1	0.08	<0.5
	Jun 2020	6.9	151	135	16.0	5.1	0.8	5.5	16.7	1.4	<2	65	0.3	<1	<0.01	0.7
	Nov 2020	6.9	154	106	16.0	-	1.1	5.1	7	<2.5	<2	-	<0.1	<1	<0.01	0.6
	Apr 2021	7.2	151	111	20.7	5.88	2.1	4.98	7.4	<2.5	<2	69	<0.1	<1	<0.01	<0.5
Avg	6.9	193.3	116.0	22.2	8.2	1.4	6.5	21.2	4.0	<2	63.9	0.1	0.6	0.04	0.5	
Bore 2	Apr 2016	6.8	138	124	13.7	5.5	1.9	4.4	9.9	<5	<2	55	<0.1	<1	<0.1	<0.5
	Oct 2016	7	132	117	15.7	5.4	2	4.6	9.5	2.3	<2	56	<0.1	0.3	<0.01	<0.5
	Jun 2017	7	139	107	11.3	6.3	0.6	4.2	9.3	1.8	<2	56	<0.1	<0.5	<0.01	<0.5
	Sep 2017	6.7	139	128	11	5.9	1.1	5.4	9.2	<2.5	<2	55	0.3	<0.5	<0.01	<0.5
	Jan 2018	7	140	114	9.9	5.9	1.1	5	8.7	2.2	<2	53	<0.1	<0.5	<0.01	<0.5
	Jun 2018	6.9	139	94	19	4.8	1.3	4.8	19.4	6.6	<2	57	1.2	0.3	0.07	1
	Dec 2018	6.9	140	94	15.3	5.7	1	4.7	8.7	2.9	<2	53	<0.1	<0.5	0.02	<0.5
	Jun 2019	6.8	138	117	22	6.8	1.2	5.4	9.3	<2.5	-	55	<0.1	<0.5	0.08	<0.5
	Dec 2019	7.0	141	100	13.4	5.5	1.6	4.5	9.5	5	<2	-	<0.1	<0.1	<0.01	<0.5
	Jun 2020	6.9	139	114	14.4	5.1	0.8	5.1	32.8	1.3	<2	59	<0.1	<1	0.04	0.7
	Nov 2020	6.9	143	95	13.0	-	1.0	4.60	8	<2.5	<2	-	<0.1	<1	<0.01	<0.5
	Apr 2021	6.6	139	83	17.7	5.63	2.1	4.94	7.5	<2.5	<2	59	<0.1	<1	<0.01	<0.5
	Avg	6.9	138.9	107.3	14.7	5.7	1.3	4.8	11.8	3.1	<2	55.8	0.2	0.6	0.03	0.6

Table 5 - Production Bore Water Levels

Bore ID	Standing Water Level (mBGL)
	August 2015
Bore 1	24.5
Bore 2	24.2

Table 6 - Piezometer Water Levels

Date	Standing Water Level (mTOC ¹)											
	Piezo 1 shallow	Piezo 1 deep	Piezo 2 shallow	Piezo 2 deep	Piezo 3 shallow	Piezo 3 deep	Piezo 4 shallow	Piezo 4 deep	Piezo 5 shallow	Piezo 5 deep	Piezo 6 shallow	Piezo 6 deep
Feb 2016	n/a ²	27.1	n/a ²	25.9	n/a ²	26.0	n/a ²	25.7	n/a ²	25.6	n/a ²	25.6
Apr 2016	n/a ²	25.9	n/a ²	25.9	n/a ²	25.9	n/a ²	25.7	n/a ²	25.7	n/a ²	25.7
Oct 2016	n/a ²	24.4	n/a ²	n/a ³	n/a ²	24.9	n/a ²	n/a ³	n/a ²	n/a ³	n/a ²	n/a ³
Mar 2017	n/a ²	25.8	n/a ²	25.4	n/a ²	25.5	n/a ²	25.6	n/a ²	25.3	n/a ²	25.3
Jun 2017	n/a ²	24.1	n/a ²	24.8	n/a ²	24.7	n/a ²	25.5	n/a ²	25.0	n/a ²	25.0
Sep 2017	n/a ²	25.0	n/a ²	24.6	n/a ²	24.7	n/a ²	25.4	n/a ²	24.6	n/a ²	24.6
Dec 2017	n/a ²	25.9	n/a ²	25.5	n/a ²	25.5	n/a ²	25.4	n/a ²	25.4	n/a ²	25.4
Mar 2018	n/a ²	27.9	n/a ²	26.1	n/a ²	26.2	n/a ²	25.7	n/a ²	25.8	n/a ²	25.8
Jun 2018	n/a ²	27.4	n/a ²	25.9	n/a ²	26.1	n/a ²	25.9	n/a ²	25.8	n/a ²	25.8
Sep 2018	n/a ²	26.4	n/a ²	25.8	n/a ²	25.8	n/a ²	26.0	n/a ²	25.8	n/a ²	25.7
Dec 2018	n/a ²	27.9	n/a ²	26.3	n/a ²	26.4	n/a ²	26.1	n/a ²	26.0	n/a ²	26.0
Mar 2019	n/a ²	28.4	n/a ²	26.9	n/a ²	27.2	n/a ²	26.3	n/a ²	26.3	n/a ²	26.5
Jun 2019	n/a ²	26.7	n/a ²	27.4	n/a ²	26.9	n/a ²	26.4	n/a ²	26.3	n/a ²	26.5
Sep 2019	n/a ²	26.2	n/a ²	26.3	n/a ²	26.3	n/a ²	26.4	n/a ²	26.4	n/a ²	26.3
Dec 2019	n/a ²	28.6	n/a ²	26.9	n/a ²	27.1	n/a ²	27.0	n/a ²	26.6	n/a ²	26.6
Mar 2020	n/a ²	28.0	n/a ²	27.2	n/a ²	27.5	n/a ²	27.2	n/a ²	26.9	n/a ²	26.9
Jun 2020	n/a ²	26.9	n/a ²	27.0	n/a ²	26.9	n/a ²	27.0	n/a ²	26.8	n/a ²	26.9
Nov 2020	n/a ²	27.3	n/a ²	26.9	n/a ²	26.9	15.4	25.5	n/a ²	26.8	n/a ²	26.9
Apr 2021	n/a ²	26.9	n/a ²	26.9	n/a ²	26.9	n/a ²	25.5	n/a ²	26.9	n/a ²	27.1
Average	n/a	26.7	n/a	26.2	n/a	26.2	15.4	26.0	n/a	26.0	n/a	26.0

1 - metres below the top of the casing (mTOC)

2 - piezometer not monitored due to not being a component of the WMP at the time (historically dry)

3 - not monitored due to lack of access (flooding)