

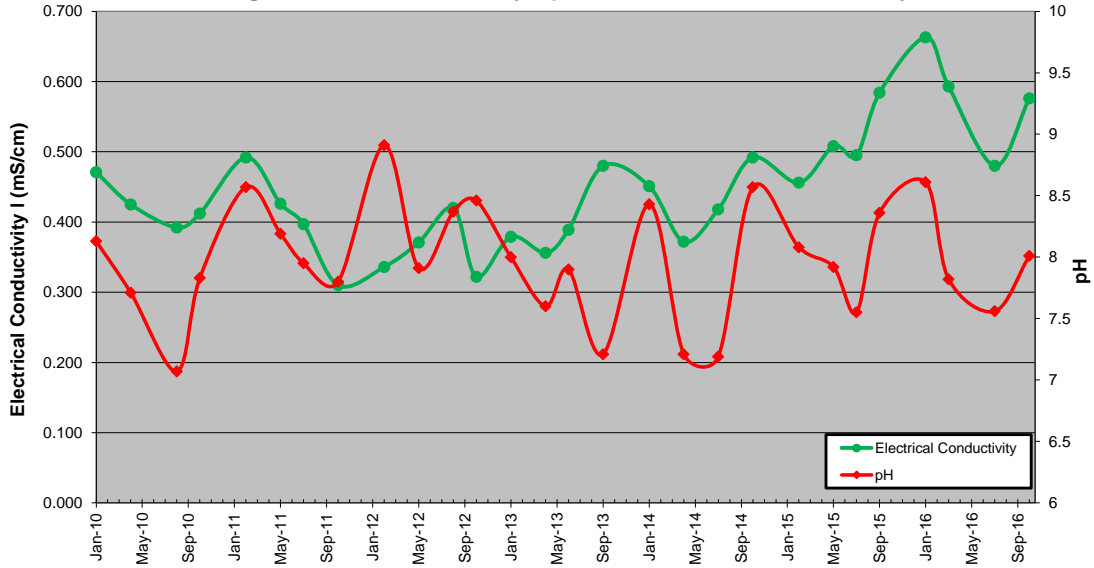
CUDGEN LAKES SAND QUARRY						
SURFACE WATER ANALYSES - POINT 1 - EPL 12385 (Initial Dredge Pond)						
Last Published	16 January 2017					
Licensee	Gales-Kingscliff Pty Limited					
Site Address	Crescent Street CUDGEN NSW 2487					
(Date sampled)*	Time	Dissolved Oxygen	pH	Redox Potential	Salinity	Temperature
Units		mg/L	-	millivolts	mS/cm	°C
EPA Limits	None Specified					
2010						
21-Jan-10	11AM	8.71	8.13	61	0.471	25.7
06-Apr-10	330PM	7.01	7.71	-31	0.425	21.3
13-Aug-10	9AM	5.92	7.07	-73	0.392	18.3
22-Oct-10	9AM	6.13	7.83	-56	0.412	23.9
Average		6.94	7.69	-25	0.425	22.3
Minimum		5.92	7.07	-73	0.392	18.3
Maximum		8.71	8.13	61	0.471	25.7
2011						
04-Feb-11	4PM	8.41	8.57	62	0.492	27.1
17-May-11	430PM	7.41	8.19	31	0.426	23.1
07-Jul-11	8AM	7.35	7.95	-10	0.397	19.7
17-Oct-11	7AM	6.05	7.8	18	0.310	24.7
Average		7.31	8.13	25	0.406	23.7
Minimum		6.05	7.80	-10	0.310	19.7
Maximum		8.41	8.57	62	0.492	27.1
2012						
16-Feb-12	1130AM	7.17	8.91	77	0.336	28.7
01-May-12	4PM	6.53	7.91	62	0.371	22.8
23-Aug-12	430PM	7.21	8.37	83	0.420	21.7
30-Oct-12	5PM	7.36	8.46	71	0.322	26.2
Average		7.07	8.41	73	0.362	24.9
Minimum		6.53	7.91	62	0.322	21.7
Maximum		7.36	8.91	83	0.420	28.7
2013						
23-Jan-13	4PM	8.90	8.00	81	0.379	29.2
02-Apr-13	8AM	6.20	7.60	68	0.356	23.7
21-Jun-13	830AM	6.18	7.90	57	0.389	21.7
25-Sep-13	1230PM	5.30	7.21	48	0.480	24.6
Average		6.65	7.68	64	0.401	24.8
Minimum		5.30	7.21	48	0.356	21.7
Maximum		8.90	8.00	81	0.480	29.2
2014						
21-Jan-14	9AM	7.2	8.43	97	0.451	28.3
07-Apr-14	1030AM	5.7	7.21	37	0.372	25.7
14-Jul-14	430PM	5.8	7.19	^	0.418	20.1
20-Oct-14	4PM	8.3	8.57	93	0.492	27.6
Average		6.75	7.85	76	0.433	25.4
Minimum		5.70	7.19	37	0.372	20.1
Maximum		8.30	8.57	97	0.492	28.3
2015						
05-Feb-15	3PM	6.38	8.08	67	0.456	28.7
20-May-15	330PM	7.14	7.92	87	0.508	24.8
06-Jul-15	830AM	7.02	7.55	59	0.495	21.5
29-Sep-15	10AM	6.19	8.36	63	0.584	26.4
Average		6.68	7.98	69	0.511	25.4
Minimum		6.19	7.55	59	0.456	21.5
Maximum		7.14	8.36	87	0.584	28.7
2016						
26-Jan-16	930AM	5.87	8.61	192	0.663	27.3
17-Mar-16	930AM	5.97	7.82	70	0.593	26.8
13-Jul-16	3PM	5.05	7.56	45	0.480	21.7
12-Oct-16	730AM	6.12	8.01	99	0.576	26.4
Average		5.75	8.00	102	0.578	25.6
Minimum		5.05	7.56	45	0.480	21.7
Maximum		6.12	8.61	192	0.663	27.3

*All samples are measured using field instrumentation

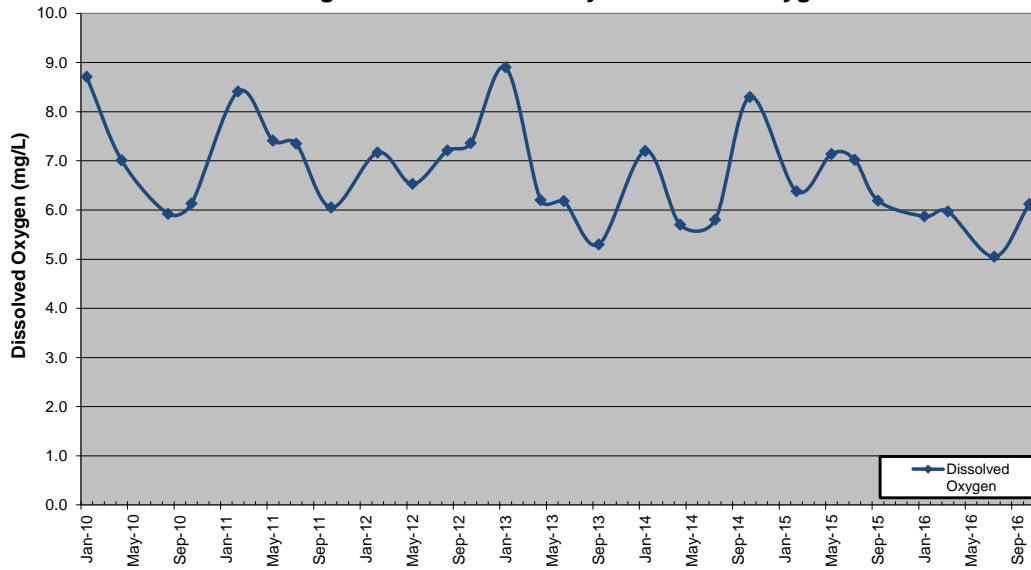
^14/07/2014 Redox meter failure in field

All samples collected by Mark Tunks HMC Environmental Consulting

Cudgen Lakes Sand Quarry - pH and Electrical Conductivity



Cudgen Lakes Sand Quarry - Dissolved Oxygen



Cudgen Lakes Sand Quarry - Redox Potential

