



**COOTAMUNDRA -
GUNDAGAI REGIONAL
COUNCIL**

Gundagai STP

Effluent Quality fortnightly Report

July 2020

Gundagai Sewage Treatment Plant

This report provides fortnightly test results of treated effluent at the sampling points provided in figure 2.

Gundagai Sewage Treatment Plant was constructed in the 1930s consisting of an Imhoff tank, trickling filters, humus tank and sludge digestion facilities with sludge drying beds.

Treated effluent from humus tanks is stored in the maturation pond and transferred to the Golf Course Irrigation pond to irrigate Bidgee Bank Golf Course and sporting fields.

At present a new Sewage Treatment Plant is under construction with Intermittently Decanted Extended Aeration (IDEA) with sludge dewatering facilities. Upon completion of testing and commissioning of the new treatment plant which is designed to produce higher quality treated effluent for irrigation reuse.



Figure 1- Layout of Gundagai Sewage Treatment Plant

Maturation Pond

Treatment Plant

Golf Course
Irrigation Pond

Location of Water Sampling Points

Sampling Point -
Maturation Pond Outlet



Figure 2- Location of Sampling Points

Sampling Point -
Irrigation Pond Inlet

Sampling Point
Irrigation Pond Outlet

Fortnightly Sampling of Treated Effluent - Bidgee Banks Golf Course (Point Irrigation)								
Parameter	Units	22/5/20	2/6/20	19/6/20	30/6/20	14/7/20	29/7/20	Average
Biochemical Oxygen Demand	mg/L	11	11	7	12	16	7	12
Calcium (dissolved)	mg/L	20.1	22.7	25.3	20.7	22.8	22.5	20
Faecal coliforms	cfu/100mL	3500	108	3670	111	26700	5110	1905
Conductivity	µS/cm	553	619	699	793	815	764	633
Magnesium (dissolved)	mg/L	7.14	8.59	9.20	7.54	8.83	8.63	7
Nitrogen, total	mg/L	10	15	27	24	42	Pending	22
Nitrate/Nitrite as N	mg/L	<0.1	<0.1	3.4	2.1	6.1	3.6	5
Oil & Grease	mg/L	2	2	6	2	4	3	3
Phosphorus, Total	mg/L	1.98	3.78	4.03	3.98	7.36	Pending	5
pH	pH units	7.0	7.1	6.4	7.5	7.4	7.6	8
Sodium Adsorption Ratio	Ratio	3	3	3	3	3	Pending	3
Sodium (dissolved)	mg/L	55.4	62.8	73.6	62.6	72.5	68.8	70
Total Kjeldahl Nitrogen	mg/L	10	15	24	22	36	Pending	17
Total Suspended Solids	mg/L	21	26	28	12	14	Pending	36

Fortnightly Sampling of Treated Effluent - Bidgee Banks Golf Course (Golf Course Pond Inlet)								
Parameter	Units	22/5/20	2/6/20	19/6/20	30/6/20	30/6/20	30/6/20	Average
Biochemical Oxygen Demand	mg/L	19	20	37	21	9	10	21
Calcium (dissolved)	mg/L	21.4	24.4	24.5	20.8	22.2	22	20
Faecal coliforms	cfu/100mL	222000	14000	100000	55600	233000	27800	60718
Conductivity	µS/cm	690	725	693	788	740	747	688
Magnesium (dissolved)	mg/L	7.50	8.38	9.31	8.22	8.25	8.81	7
Nitrogen, total	mg/L	31	31	36	34	31	Pending	35
Nitrate/Nitrite as N	mg/L	5.8	5.6	5.0	4.9	2.3	6.6	8
Oil & Grease	mg/L	1	1	4	3	3	8	3
Phosphorus, Total	mg/L	4.82	6.98	5.16	5.54	6.19	Pending	7
pH	pH units	7.3	7.6	6.9	7.8	7.5	7.6	8
Sodium Adsorption Ratio	Ratio	3	3	3	3	3	Pending	3
Sodium (dissolved)	mg/L	59.9	68.8	72.5	67	64.4	63.2	69
Total Kjeldahl Nitrogen	mg/L	25	25	31	29	29	Pending	24
Total Suspended Solids	mg/L	43	26	66	47	9	Pending	62

Bidgee Banks Golf Course (Maturation Pond Outlet)								
Parameter	Units	22/5/20	2/6/20	19/6/20	30/6/20	30/6/20	30/6/20	Average
Biochemical Oxygen Demand	mg/L	43	23	30	24	13	26	22
Calcium (dissolved)	mg/L	22.3	23.5	25.2	22.7	22.5	21.9	20
Faecal coliforms	cfu/100mL	3330000	12700	100000	44400	66700	62200	153595
Conductivity	µS/cm	761	743	684	800	818	723	665
Magnesium (dissolved)	mg/L	7.69	8.03	9.83	9.03	8.62	9.30	7
Nitrogen, total	mg/L	44	35	37	35	36	Pending	34
Nitrate/Nitrite as N	mg/L	9.3	6.3	5.7	5.8	4.2	9.7	8
Oil & Grease	mg/L	1	2	4	2	3	4	5
Phosphorus, Total	mg/L	1.96	7.83	5.45	5.78	7.21	Pending	7
pH	pH units	7.3	7.7	8.7	8	7.5	7.5	8
Sodium Adsorption Ratio	Ratio	3	3	3	3	3	Pending	3
Sodium (dissolved)	mg/L	63.2	67.3	72.6	73.3	68.2	59.1	70
Total Kjeldahl Nitrogen	mg/L	35	29	31	29	32	Pending	26
Total Suspended Solids	mg/L	19	27	60	55	6	Pending	61

**Fortnightly Sampling of Treated Effluent -
Bidgee Banks Golf Course (Point
Irrigation)**

Parameter	Faecal coliforms
Units	cfu/100mL
14/1/19	1
31/1/19	100
13/2/19	50
28/2/19	444
14/3/19	10
28/3/19	90
11/4/19	734
23/4/19	2600
9/5/19	6000
23/5/19	5600
6/6/19	6560
4/7/19	300
18/7/19	50
1/8/19	1
19/8/19	83
29/8/19	20
12/9/19	37
30/9/19	119
10/10/19	64
24/10/19	606
6/11/19	101
20/11/19	28
5/12/19	192
19/12/19	606
7/1/20	5050
24/1/20	550
5/2/20	140
18/2/20	10
3/3/20	505
16/3/20	2020
31/3/20	1410
14/4/20	800
22/4/20	210
13/5/19	3200
19/5/19	3100
22/5/20	3500
29/5/20	3330
2/6/20	108
5/6/20	800
9/6/20	1100
12/6/20	1110
16/6/20	372
19/6/20	3670
24/6/20	1670
26/6/20	12400
30/6/20	111
3/7/20	4670
14/7/20	26700
17/7/20	5330
21/7/20	1890
24/7/20	667
29/7/20	5110
31/7/20	1210
Average	2172

**Fortnightly Sampling of Treated Effluent -
Bidgee Banks Golf Course (Golf Course
Pond Inlet)**

Parameter	Faecal coliforms
Units	cfu/100mL
14/1/19	2500
31/1/19	96700
13/2/19	3670
28/2/19	34400
14/3/19	22500
28/3/19	60000
11/4/19	36000
23/4/19	73000
9/5/19	169000
23/5/19	96000
6/6/19	193000
4/7/19	10800
18/7/19	37400
1/8/19	150
19/8/19	10000
29/8/19	55
12/9/19	4500
30/9/19	2020
10/10/19	8590
24/10/19	25600
6/11/19	178000
20/11/19	1620
5/12/19	3160
19/12/19	4340
7/1/20	122000
24/1/20	50200
5/2/20	27000
18/2/20	33300
3/3/20	33300
16/3/20	28300
31/3/20	48500
14/4/20	280000
22/4/20	20000
13/5/19	3800
19/5/19	24400
22/5/20	222000
29/5/20	233000
2/6/20	14000
5/6/20	167000
9/6/20	22200
12/6/20	14400
16/6/20	10000
19/6/20	100000
24/6/20	178000
26/6/20	389000
30/6/20	55600
3/7/20	144000
30/6/20	233000
17/7/20	75600
21/7/20	12200
24/7/20	1110
30/6/20	27800
31/7/20	11100
Average	68940

**Bidgee Banks Golf Course (Maturation
Pond Outlet)**

Parameter	Faecal coliforms
Units	cfu/100mL
13/2/19	6560
28/2/19	40000
14/3/19	15100
28/3/19	83300
11/4/19	41000
23/4/19	68000
9/5/19	187000
23/5/19	103000
6/6/19	212000
4/7/19	13600
18/7/19	12100
1/8/19	340
19/8/19	10000
29/8/19	100
12/9/19	4500
30/9/19	2420
10/10/19	44400
24/10/19	90000
6/11/19	178000
20/11/19	8890
5/12/19	6400
19/12/19	4020
7/1/20	178000
24/1/20	51100
5/2/20	34000
18/2/20	149000
3/3/20	26300
16/3/20	45400
31/3/20	52500
14/4/20	300000
22/4/20	100000
13/5/19	
19/5/19	23200
22/5/20	3330000
29/5/20	189000
2/6/20	12700
5/6/20	411000
9/6/20	33300
12/6/20	322000
16/6/20	5300
19/6/20	100000
24/6/20	300000
26/6/20	511000
30/6/20	44400
3/7/20	189000
30/6/20	66700
17/7/20	82200
21/7/20	32200
24/7/20	27600
30/6/20	62200
31/7/20	47500
Average	157127

