

BABELEGI
WASTE WATER TREATMENT WORKS

2. INFLOW

	DESIGN CAPACITY	JUL '12	AUG '12	SEPT '12	OCT '12	NOV '12	DEC '12
FLOW: Total for the Month (M ³)		56.42	60.52	61.650	76.94	74.330	71.08
Daily Average (M ³ / day)	4.7 Ml / day	1.820	1.950	2.060	2.480	2.478	2.283

3. EFFLUENT DISCHARGE MONITORING

3.1 LABORATORY RESULTS (COMPOSITE SAMPLE)
Compliance Point

Date Sample Number	PERMIT LIMITS	JULY 2012		AUGUST 2012		SEPTEMBER 2012		OCTOBER 2012		NOVEMBER 2012		DEC 2012	
		05/07/2012 1	16/07/2012 2	03/08/2012 3	19/08/2012 4	03/09/2012 5	18/09/2012 6	04/10/2012 7	17/10/2012 8	08/11/2012 9	18/11/2012 10	04/12/2012 11	
pH	≥ 6.5 ≤ 8.5	7.84	7.96	7.78	8.32	8.7	7.98	8.25	8.14	8.16	8.25	8.12	
Electrical Conductivity (mS/m)	≤ 80mS/m	227	220	259	248.8	278.8	222	246.60	205.00	198.9	219	209	
Free & saline ammonia (as N) mg/l	≤ 1 mg/l	1.37	0.91	1.3	7.11	0.83	0.89	4.86	2.70	0.49	2.91	2.77	
Nitrate (as N) mg/l	≤ 6 mg/l	2.48	0.41	0	0	0	0	0.00	0.00	0	0.38	0.68	
Orthophosphate (as P) mg/l	≤ 0.9 mg/l	2.83	3.12	6.86	4.94	2.77	2.02	1.35	2.00	2.44	3.54	5.66	
Chemical Oxygen demand (as O) mg/l	≤ 50 mg/l	99	91	41.3	181	115	91	95	63	67	42	42	
Suspended solids mg/l	≤ 10 mg/l	23.6	25.2	50	55.2	4.8	41	22.00	28.80	13.6	8.4	3.2	

(Grab Sample) Time of day	PERMIT LIMITS	JULY 2012		AUGUST 2012		SEPTEMBER 2012		OCTOBER 2012		NOVEMBER 2012		DECEMBER 2012	
		am	pm	am	pm	am	pm	am	pm	am	pm		
Faecal Coliforms													
Minimum		0	100	1000	2000	200	400	400	200	0	0	0	
Maximum		8100000	7700000	8900000	8100000	8900000	1500000	9100000	1700000	4900000	3000000	5700000	
Average		781584	1198168	1302258	1108750	420087	275320	78387	98135	37293	26712	83889	
% of Compliance	≤ 1000 CFU/100 ml	13%	14%	6%	0%	10%	5%	23%	43%	27%	22%	31%	
95 Percentile		2050000	6535000	5100000	3375000	809000	1120000	3150000	2050000	4900000	3000000	541742	
Nr of Samples		31	22	31	24	30	20	31	23	27	22	31	

**BAVAANSPOORT
WASTE WATER TREATMENT WORKS**

2. INFLOW

	DESIGN CAPACITY	JUL '12	AUG '12	SEPT '12	OCT '12	NOV '12	DEC '12
FLOW: Total for the Month (M ³)		1335.540	1225.400	1445.350	1524.070	1525.100	1707.730
Daily Average (M ³ / day)	58 MI / day	43.080	39.530	48.180	49.160	50.840	55.088

3. EFFLUENT DISCHARGE MONITORING

3.1 LABORATORY RESULTS (COMPOSITE SAMPLE)

Compliance Point

Date Sample Nr	PERMIT LIMITS	JULY 2012		AUGUST 2012		SEPTEMBER 2012		OCTOBER 2012		NOVEMBER 2012		DECEMBER 2012	
		10/07/2012 1	22/07/2012 2	16/08/2012 3	27/08/2012 4	12/09/2012 5	27/09/2012 6	09/10/2012 7	21/10/2012 8	16/11/2012 9	28/11/2012 10	13/12/2012 11	
pH	≥ 6.5 ≤ 8.5	7.97	7.71	7.75	7.94	7.95	7.95	7.87	7.70	7.71	7.51	7.81	
Electrical Conductivity (mS/m)	≤ 80 mS/m	63.5	64.2	69.8	83.9	69.9	71.8	73.7	64.4	47.8	65.2	69.9	
Free & saline ammonia (as N) mg/l	≤ 1 mg/l	6.08	4.11	12.70	32	13.3	14.7	18.90	8.76	21	12.8	15.6	
Nitrate (as N) mg/l	≤ 6 mg/l	1.16	6.43	3.49	1	1.9	2.35	0.90	1.09	0.56	1.53	1.25	
Orthophosphate (as P) mg/l	≤ 0.9 mg/l	1.45	1.09	0.89	4.51	0.54	2.64	1.69	0.19	1.25	0.02	0.5	
Chemical Oxygen demand (as O) mg/l	≤ 50 mg/l	61	136	172	112	124	62	92	208	213	815	65	
Suspended solids mg/l	≤ 10 mg/l	14	84.5	44.8	48.4	4.8	34	34.40	140.40	162.8	596	23.2	

(Grab Sample) Time of day	PERMIT LIMITS	JULY 2012		AUGUST 2012		SEPTEMBER 2012		OCTOBER 2012		NOVEMBER 2012		DECEMBER 2012	
		am	pm	am	pm	am	pm	am	pm	am	pm	am	pm
Faecal Coliforms													
Minimum		700	200	13000	11000	5000	6000	1000	6000	0	0	0	0
Maximum		140000	200000	630000	700000	900000	1400000	1900000	1400000	1300000	10000000	4700000	0
Average	≤ 1000 CFU/100 ml	23984	44984	148679	161905	127448	301536	301536	233211	397897	792826	683606	0
% of Compliance		10%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
95 Percentile		98000	158000	500000	500000	266000	333000	1330000	941000	29	23	18	0
Nr of Samples		31	22	28	21	29	19	28	19	29	23	18	0

**DASPOORT
WASTE WATER TREATMENT WORKS**

2. INFLOW

	DESIGN CAPACITY	JUL '12	AUG '12	SEPT '12	OCT '12	NOV '12	DEC '12
FLOW: Total for the Month (Mt)	Mt	1288.56	1259.77	1333.15	1387.02	1136.59	1177.04
Daily Average (Mt / day)	60 Mt / day	41.570	40.640	44.440	44.740	37.890	37.969

3. EFFLUENT DISCHARGE MONITORING

3.1 LABORATORY RESULTS (COMPOSITE SAMPLES)

Compliance Point

Date Sample Number	PERMIT LIMITS	JULY 2012		AUG '2012		SEPTEMBER 2012		OCTOBER 2012		NOV 2012		DEC 2012	
		am	pm	am	pm	am	pm	am	pm	am	pm	am	pm
pH	≥ 6.5 ≤ 8.5	7.83	7.79	7.85	7.83	7.84	7.87	7.83	7.84	7.87	7.83	7.83	8.05
Electrical Conductivity (mS/m)	≤ 80 mS/m	58.4	60.4	55.5	59.1	60.6	60.10	57.4	56.30	60.10	57.4	57.4	52
Free & saline ammonia (as N) mg/l	≤ 1 mg/l	1.17	0.94	1.2	0.54	1.54	0.61	1.6	0.11	0.61	1.6	0.35	
Nitrate (as N) mg/l	≤ 6 mg/l	6.99	9.01	7.88	8.83	8.22	9.46	6.29	7.27	9.46	6.29	6.14	
Orthophosphate (as P) mg/l	≤ 0.9 mg/l	0.2	0.26	0.43	0.68	0.71	0.34	0.33	0.56	0.34	0.33	0.15	
Chemical Oxygen demand (as O) mg/l	≤ 50 mg/l	35	229	33	36	42	29	27	37	29	27	30	
Suspended solids mg/l	≤ 10 mg/l	4	8	7.2	5.2	11.6	1.2	22.4	7.6	1.2	22.4	2.89	

(Grab Sample) Time of day	PERMIT LIMITS	JULY 2012		AUGUST 2012		SEPTEMBER 2012		OCTOBER 2012		NOVEMBER 2012		DECEMBER 2012	
		am	pm	am	pm	am	pm	am	pm	am	pm	am	pm
Faecal Coliforms													
Minimum		0	0	0	0	0	0	0	0	0	0	0	0
Maximum		120270	120	500000	500000	500000	500000	500000	500000	500000	110	290	500000
Average		4043	33	50064	23909	38551	34706	43573	34706	43573	12	29	17291
% of Compliance	≤ 1000 CFU/100 ml	97%	100%	87%	90%	92%	86%	91%	86%	91%	12	29	17291
95 Percentile		292	118	500000	1500	375233	300760	450053	300760	450053	27	21	29
Nr of Samples		30	22	30	21	28	23	23	29	23	27	21	29

**GODRICH
WASTE WATER TREATMENT WORKS**

2. INFLOW

	DESIGN CAPACITY	JULY '12	AUG '12	SEPT '12	OCT '12	NOV '12	NOV '12	DEC '12
FLOW: Total for the Month (M ³)		147,230	159,890	247,660	261,760	228.6	228.6	217.85
Daily Average (M ³ / day)	5 MI / day	4,750	5,160	8,260	8,440	7,620	7,620	7,027

3. EFFLUENT DISCHARGE MONITORING

3.1 **LABORATORY RESULTS (COMPOSITE SAMPLE)**
Compliance Point

Date Sample Nr	PERMIT LIMITS	JULY 2012		AUG 2012		SEPT 2012		OCT 2012		NOV 2012		DEC 2012	
		18/07/2012	01/08/2012	23/08/2012	17/09/2012	01/10/2012	17/10/2012	08/11/2012	20/11/2012	06/12/2012			
pH	≥ 6.5 ≤ 8.5	7.41	7.61	7.68	7.75	7.07	7.39	7.21	7.79	7.47			
Electrical Conductivity (mS/m)	≤ 80 mS/m	56.2	63.3	55.8	53.8	62.6	42.70	53.50	63.10	49.1			
Free & saline ammonia (as N) mg/l	≤ 1 mg/l	0.79	14.5	0.54	0.34	0.01	6.26	9.98	18.30	0			
Nitrate (as N) mg/l	≤ 6 mg/l	0.87	0.15	0	2.13	3.01	0.11	0.14	0.03	4.08			
Orthophosphate (as P) mg/l	≤ 0.9 mg/l	0.19	0.68	0.05	0.06	0.04	0.26	0.33	0.36	0.01			
Chemical Oxygen demand (as O) mg/l	≤ 50 mg/l	22	31	32	23	40	31	41	31	9			
Suspended solids mg/l	≤ 10 mg/l	5.6	12.4	6.8	2.4	4.4	23.20	10.00	8.00	1.2			

(Grab Sample) Time of day	PERMIT LIMITS	JULY 2012		AUGUST 2012		SEPTEMBER 2012		OCTOBER 2012		NOVEMBER 2012		DECEMBER 2012	
		am	pm	am	pm	am	pm	am	pm	am	pm	am	pm
Faecal Coliforms													
Minimum		0	0	0	0	0	0	0	0	0	0	0	0
Maximum		800	500000	500000	500000	500000	500000	500000	500000	1260	5600000	5600000	88972
Average		36	50044	17455	55818	84	84	84	84	84	84	84	84
% of Compliance	≤ 1200 CFU/120 ml	100%	90%	97%	89%	89%	89%	89%	89%	89%	89%	89%	89%
95 Percentile		53	50000	628	628	29	29	27	27	16	16	16	29
Nr of Samples		28	30	29	29	27	27	27	27	16	16	16	29

**KLIPGAT
WASTE WATER TREATMENT WORKS**

2. INFLOW

	JUL '12	AUG '12	SEPT '12	OCT '12	NOV '12	DEC '12
DESIGN CAPACITY						
FLOW: Total for the Month (M³)	985.34	999.4	951.32	1137.21	1159.01	1315.820
Daily Average (M³ / day)	31.140	32.240	31.710	63.880	38.630	42.446

3. EFFLUENT DISCHARGE MONITORING

3.1 LABORATORY RESULTS (COMPOSITE SAMPLE)

Compliance Point

Date Sample Number	JULY 2012		AUG 2012		SEPT 2012		OCT 2012		NOV 2012		DEC 2012	
	12/07/2012	13/08/2012	29/08/2012	10/09/2012	10/09/2012	25/09/2012	11/10/2012	28/10/2012	14/11/2012	27/11/2012	06/12/2012	10
pH	8.02	7.86	7.63	7.7	7.44	7.71	7.39	7.62	7.62	7.62	7.62	NO SAMPLE
Electrical Conductivity (mS/m)	63.4	81.7	85.6	94	94	106.00	68.20	98.7	98.7	98.7	98.7	NO SAMPLE
Free & saline ammonia (as N) mg/l	4.01	4.91	2.24	4.4	6.33	8.33	4.63	2.84	2.84	2.84	2.84	NO SAMPLE
Nitrate (as N) mg/l	4.48	8.96	3.77	0.48	0.42	2.74	1.46	1.14	1.14	1.14	1.14	NO SAMPLE
Orthophosphate (as P) mg/l	1.81	4.04	1.51	1.69	3.05	4.34	2.57	1.27	1.27	1.27	1.27	NO SAMPLE
Chemical Oxygen demand (as O) mg/l	53	69	32	45	39	72	45	50	50	50	50	NO SAMPLE
Suspended solids mg/l	8	24.8	3.6	5.2	8	13.60	14.40	9.60	9.60	9.60	9.60	NO SAMPLE

(Grab Sample) Time of day	JULY 2012		AUGUST 2012		SEPTEMBER 2012		OCTOBER 2012		NOVEMBER 2012		DECEMBER 2012	
	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm
PERMIT LIMITS												
Faecal Coliforms												
Minimum	0	120	400	120	0	120	800	120	10000	120000	120	120
Maximum	500000	510000	900000	500000	770000	890000	890000	840000	1200000	1200000	5000000	5000000
Average	40217	68983	178213	303177	200621	171985	379545	299083	350455	311250	2371739	922800
% of Compliance	24%	17%	17%	26%	21%	44%	3%	11%	11%	11%	11%	11%
95 Percentile	128400	240000	511000	760000	692000	633000	824000	706500	706500	706500	706500	706500
Nr of Samples	29	30	30	31	29	27	29	28	22	24	23	15

**REFILWE
WASTE WATER TREATMENT**

1. INFLOW

	DESIGN CAPACITY	JUL '12	AUG '12	SEPT '12	OCT '12	NOV '12	DEC '12
FLOW: Total for the Month (ME)		52.96	35.02	38.71	41.03	60.81	66.590
Daily Average (ME / day)	2.2 MI / day	1.710	1.130	1.290	1.320	2.030	2.148

2. EFFLUENT DISCHARGE MONITORING

2.1 LABORATORY RESULTS (COMPOSITE SAMPLE)
Compliance Point

Date Sample Number	PERMIT LIMITS	JULY 2012		AUGUST 2012		SEPT 2012		OCT 2012		NOVEMBER 2012		DEC 2012	
		am	pm	am	pm	am	pm	am	pm	am	pm	am	pm
pH	≥ 5.5 ≤ 8.5	7.33	7.86	7.34	7.56	7.68	7.58	8.44	7.61	7.64	7.74	7.57	7.57
Electrical Conductivity (mS/m)	≤ 80 mS/m	96.4	97.4	115	97.3	94.2	83.9	98.3	93.8	90.4	88.3	40	40
Free & saline ammonia (as N) mg/t	≤ 1 mg/t	1.77	33.6	29.7	29.2	2.49	24.3	38.50	34.40	29.9	34.4	2.54	2.54
Nitrate (as N) mg/t	≤ 15 mg/t	4.4	0.22	1.37	0.12	1.26	0.02	0.16	0.12	0.11	0.28	2.53	2.53
Orthophosphate (as P) mg/t	≤ 0.9 mg/t	3.66	1.59	0.98	2.06	0.12	3.54	6.33	6.98	1.98	3.08	2.21	2.21
Chemical Oxygen demand (as O) mg/t	≤ 65 mg/t	130	44	47	50	445	79	66	64	83	78	47	47
Suspended solids mg/t	≤ 15 mg/t	40	12.3	6.8	7.2	7.6	21.6	10.50	45.20	18.4	9.6	8	8

(Grab Sample) Time of day	PERMIT LIMITS	JULY 2012		AUGUST 2012		SEPTEMBER 2012		OCTOBER 2012		NOVEMBER 2012		DECEMBER 2012	
		am	pm	am	pm	am	pm	am	pm	am	pm	am	pm
Faecal Coliforms		0	0	100	0	0	0	0	0	0	0	0	0
Minimum		140000	140000	790000	5617	86000	910000	180000	186736	180000	10676	880000	880000
Maximum		14082	32%	54757	30%	5617	186736	10676	46%	10676	38453	38453	38453
Average		64600	95600	95600	26050	775000	775000	28	28	29	29	31	31
% of Compliance	≤ 1000 CFU/100 ml												
95 Percentile													
Nr of Samples		28	23	30	30	28	28	28	28	29	29	31	31

**RIETGAT
WASTE WATER TREATMENT**

1. INFLOW

	DESIGN CAPACITY	JUL '12	AUG '12	SEPT '12	OCT '12	NOV '12	DEC '12
FLOW: Total for the Month (M ³)		487.25	500.75	455.07	574.21	520.59	628.680
Daily Average (M ³ / day)	27 Ml / day	15.720	16.150	15.170	18.520	17.350	20.280

2. EFFLUENT DISCHARGE MONITORING

2.1 LABORATORY RESULTS (COMPOSITE SAMPLE)
Compliance Point

Date	Sample Number	PERMIT LIMITS	JULY 2012		AUGUST 2012		SEPT 2012		OCT 2012		NOVEMBER 2012		DEC 2012	
			1	2	13/08/2012	29/08/2012	10/09/2012	26/09/2012	11/10/2012	28/10/2012	14/11/2012	27/11/2012	06/12/2012	11
pH		≥ 5.5 ≤ 8.5			7.15	7.09	6.57	7.34	8.04	7.76	7.58	7.48		
Electrical Conductivity (mS/m)		≤ 80 mS/m			69.2	64.4	70.7	69.4	67.8	55.1	56.81	51.8		
Free & saline ammonia (as N) mg/l		≤ 1 mg/l			1.95	1.25	0.29	3.48	12.00	0.11	0.17	0.23		
Nitrate (as N) mg/l		≤ 15 mg/l			13.4	13.7	23.6	6.38	3.84	3.55	14.6	6.7		
Orthophosphate (as P) mg/l		≤ 0.9 mg/l			0.26	0.56	0.56	1.9	2.70	0.22	1.96	0.25		
Chemical Oxygen demand (as O) mg/l		≤ 65 mg/l			28	20	27	34	46	18	24	25		
Suspended solids mg/l		≤ 15 mg/l			8	10.8	6.8	8.4	10.80	6.40	1.6	0.4		
											NO SAMPLE			

(Grab Sample)	Time of day	PERMIT LIMITS	JULY 2012		AUGUST 2012		SEPTEMBER 2012		OCTOBER 2012		NOVEMBER 2012		DECEMBER 2012	
			am	pm	am	pm	am	pm	am	pm	am	pm		
Faecal Coliforms														
Minimum			0	0	0	0	0	0	0	0	0	0	0	
Maximum			12000	2500	500000	500000	500000	500000	500000	500000	1700	700	1420600	
Average			554	292	53696	65691	83422	217553	181757	205	67	239410	181845	
% of Compliance			94%	93%	86%	79%	80%	43%	52%					
95 Percentile			2220	1640	500000	500000	500000	500000	500000	500000	27	26	31	
Nr of Samples			31	27	28	23	30	29	28	25	27	26	11	

**ROOIWAL NORTH
WASTE WATER TREATMENT WORKS**

2. INFLOW

	DESIGN CAPACITY	JUL '12	AUG '12	SEPT '12	OCT '12	NOV '12	DEC '12
FLOW: Total for the Month (ME)		5435.78	5397.42	6894.99	6634.09	4734.16	4945.35
Daily Average (ME / day)	125 MI / day	175.350	174.110	229.830	214.000	157.810	159.527

3. EFFLUENT DISCHARGE MONITORING

3.1 LABORATORY RESULTS (COMPOSITE SAMPLES)

Compliance Point

	PERMIT LIMITS	JULY 2012		AUGUST 2012		SEPTEMBER 2012		OCTOBER 2012		NOVEMBER 2012		DEC 2012	
Date		03/07/2012	18/07/2012	01/08/2012	20/08/2012	02/09/2012	20/12/09/19	01/10/2012	18/10/2012	08/11/2012	20/11/2012	11/12/2012	11/12/2012
Sample Number		1	2	3	4	5	6	7	8	9	10	11	11
pH	≥ 6.5 ≤ 8.5	7.88	7.85	7.78	7.78	7.86	7.86	7.72	7.64	7.88	7.88		
Electrical Conductivity (mS/m)	≤ 80mS/m	79.6	76.2	81.5	81.5	80.6	80.6	82.3	73.9	84.3	84.3		
Free & saline ammonia (as N) mg/t	≤ 1 mg/t	0.64	0.41	5.27	5.27	1.53	1.53	3.6	1.3	6.24	6.24		
Nitrate (as N) mg/t	≤ 6 mg/t	2.17	2.19	3.31	3.31	3.52	3.52	2.83	3.16	0.39	0.39		
Orthophosphate (as P) mg/t	≤ 0.8 mg/t	1.06	1.16	2.2	2.2	0.56	0.56	1.79	0.52	3.07	3.07		
Chemical Oxygen demand (as O) mg/t	≤ 50 mg/t	99	82	110	110	49	49	96	43	63	63		
Suspended solids mg/t	≤ 10 mg/t	51.2	50	20.4	20.4	10.6	10.6	134	15.6	18.4	18.4		
													NO SAMPLE

**ROOIWAL EAST
WASTE WATER TREATMENT WORKS**

2. INFLOW

	DESIGN CAPACITY	NOV '12	DEC '12
FLOW: Total for the Month (Mℓ)		1690.77	1527.76
Daily Average (Mℓ / day)	55 Mℓ / day	56.360	49.283

3. EFFLUENT DISCHARGE MONITORING

3.1 LABORATORY RESULTS (COMPOSITE SAMPLES)
Compliance Point

	PERMIT LIMITS	NOV 12	DEC 12
Date		30/11/2012	31/12/2012
Sample Number		1	2
pH	≥ 6,5 ≤ 8,5	7.02	6.94
Electrical Conductivity (mS/m)	≤ 80mS/m	73.2	65.53
Free & saline ammonia (as N) mg/l	≤ 1 mg/l	4.77	2.64
Nitrate (as N) mg/l	≤ 6 mg/l	12.99	13.46
Orthophosphate (as P) mg/l	≤ 0.9 mg/l	4.82	0.23
Chemical Oxygen demand (as O) mg/l	≤ 50 mg/l	37.55	24.27
Suspended solids mg/l	≤ 10 mg/l	4.04	4.11

(Grab Sample)	PERMIT LIMITS	NOVEMBER 2012		DECEMBER 2012	
Time of day		am	pm	am	pm
Faecal Coliforms					
Minimum		0		0	
Maximum	≤ 1000 CFU/100 ml	74000		5000000	
Average		6786		2653243	
Nr of Samples		21		23	

**SANDSPRUIT
WASTE WATER TREATMENT WORKS**

2. INFLOW

	DESIGN CAPACITY	JUL '12	AUG '12	SEPT '12	OCT '12	NOV '12	DEC '12
FLOW: Total for the Month (M³)		334.07	353.96	359.44	469.78	437.23	497.03
Daily Average (M³ / day)	20 MI / day	10.780	11.420	11.980	15.150	14.570	16.033

3. EFFLUENT DISCHARGE MONITORING

3.1 LABORATORY RESULTS (COMPOSITE SAMPLE)

Compliance Point

Date Sample Number	PERMIT LIMITS	JULY 2012		AUGUST 2012		SEPTEMBER 2012		OCTOBER 2012		NOVEMBER 2012		DEC 2012					
		am	pm	am	pm	am	pm	am	pm	am	pm	am	pm				
pH	≥ 5.5 ≤ 8.0	12/07/2012 1	8	13/08/2012 3	7.69	7.3	10/09/2012 6	7.78	7.68	11/10/2012 7	7.65	7.76	14/11/2012 9	7.7	7.69	06/12/2012 11	7.66
Electrical Conductivity (mS/m)	< 80 mS/m		64.8		80.1	102.2		87.2	99.3		101.0	71.8		94.8	85.7		88.7
Free & saline ammonia (as N) mg/l	≤ 1 mg/l		21.6		14.6	45.5		29.7	42.2		41.5	1.0		44.6	35.8		39
Nitrate (as N) mg/l	≤ 15 mg/l		0.29		5.74	0.01		0.1	0		0.00	0.84		0.02	0.06		0.06
Orthophosphate (as P) mg/l	≤ 0.9 mg/l		0.45		9.09	2.69		0.71	2.37		4.24	0.05		3.99	2.91		2.92
Chemical Oxygen demand (as O) mg/l	≤ 65 mg/l		33		59	81		42	85		98	42		53	41		48
Suspended solids mg/l	≤ 15 mg/l		66.4		69.3	26.4		67.8	104		30.40	2.80		15.2	11.2		7.6

(Grab Sample) Time of day	PERMIT LIMITS	JULY 2012		AUGUST 2012		SEPTEMBER 2012		OCTOBER 2012		NOVEMBER 2012		DECEMBER 2012	
		am	pm	am	pm	am	pm	am	pm	am	pm	am	pm
Faecal Coliforms													
Minimum		100	200	1000	1000	1000	100	60000	10000	0	0	0	0
Maximum		710000	620000	4100000	2700000	1200000	2700000	3400000	7100000	920000	580000	500000	500000
Average		97403	86300	621323	493419	386500	546517	956129	678032	49333	19347	62308	70944
% of Compliance	≤ 1000 CFU/100 ml	16%	16%	6%	3%	3%	3%	0%	0%	0%	0%	0%	0%
95 Percentile		200000	215000	2400000	200000	1155000	1580000	2650000	2000000	30	30	30	30
Nr of Samples		31	31	31	31	30	29	31	31	30	30	26	18

**SUMMER PLACE
WASTE WATER TREATMENT WORKS**

1. INFLOW

	DESIGN CAPACITY	AUG '12	SEPT '12	OCT '12	NOV '12	DEC '12
FLOW: Total for the Month (MG)		3.7	8.93	8.24	3.22	3.411
Daily Average (MG / day)	0.3 MI / day	0.120	0.300	0.270	0.110	0.110

2. EFFLUENT DISCHARGE MONITORING

2.1 LABORATORY RESULTS (COMPOSITE SAMPLE)
Compliance Point

	LICENSE LIMITS	SEPTEMBER 2012		OCTOBER 2012			NOVEMBER 2012		DEC 2012
		07/09/2012 1	18/09/2012 2	01/10/2012 3	17/10/2012 4	08/11/2012 5	20/11/2012 6	06/12/2012 7	
pH	≥ 6.5 ≤ 8.5	7.23		7.16	7.48	7.21			7.64
Electrical Conductivity (mS/m)	≤ 80mS/m	55		25.1	44.3	53.5			36.1
Free & saline ammonia (as N) mg/l	≤ 1 mg/l	5.57		0.05	5.24	9.98			0.21
Nitrate (as N) mg/l	≤ 6 mg/l	10.8		13.3	0.28	0.14			13.9
Orthophosphate (as P) mg/l	≤ 0.9 mg/l	2.3		1	0.22	0.33			1.26
Chemical Oxygen demand (as O) mg/l	≤ 50 mg/l	64		30	18	41			25
Suspended solids mg/l	≤ 10 mg/l			12	16	10			2.4
							NO SAMPLES		
							NO SAMPLES		

TEMBA
WASTE WATER TREATMENT WORKS

2. INFLOW

	DESIGN CAPACITY	JUL '12	AUG '12	SEPT '12	OCT '12	NOV '12	DEC '12
FLOW: Total for the Month (M ³)		268.57	269.73	266.22	321.95	370.84	451.7
Daily Average (M ³ / day)	34.5 Ml / day	8.660	8.700	8.870	10.390	12.360	14.571

3. EFFLUENT DISCHARGE MONITORING

3.1 LABORATORY RESULTS (COMPOSITE SAMPLE)
Compliance Point

Date Sample Number	LICENSE LIMITS	JULY 2012		AUGUST 2012		SEPTEMBER 2012		OCTOBER 2012		NOVEMBER 2012		DECEMBER 2012	
		05/07/2012 1	16/07/2012 2	03/08/2012 3	19/08/2012 4	03/09/2012 5	19/09/2012 6	04/10/2012 7	17/10/2012 8	08/11/2012 9	18/11/2012 10	04/12/2012 11	
pH	≥ 6.5 ≤ 9.5	7.93	8.1	8.07	7.83	7.82	7.88	8.04	7.69	7.8	7.94	8.08	
Electrical Conductivity (mS/m)	≤ 70 mS/m	109	97.6	115	118.9	116.2	102.3	78.80	94.70	99.6	101	97.3	
Free & saline ammonia (as N) mg/l	≤ 1 mg/l	1.16	0.53	3.34	7.52	7.14	1.26	14.8	6.3	10.1	9.21	10.7	
Nitrate (as N) mg/l	≤ 7 mg/l	5.73	5.21	3.36	0.89	0.13	4.13	6.3	0.4	2.14	3.35	0.13	
Orthophosphate (as P) mg/l	≤ 1 mg/l	1.33	0.61	0.7	5.07	1.44	2.1	3.89	3.54	3.76	0.88	1.93	
Chemical Oxygen demand (as O) mg/l	≤ 75 mg/l	67	39	40	55	50	40	44	33	34	55	35	
Suspended solids mg/l	≤ 25 mg/l	10	4	6.4	18.8	11.6	14	13.20	26.00	31.2	18.4	31.6	

(Grab Sample) Time of day	LICENSE LIMITS	JULY 2012		AUGUST 2012		SEPTEMBER 2012		OCTOBER 2012		NOVEMBER 2012		DECEMBER 2012	
		am	pm	am	pm	am	pm	am	pm	am	pm	am	pm
Faecal Coliforms													
Minimum		0	500000	0	500000	0	650000	0	0	0	0	0	0
Maximum		500000	34806	177566	190551	287417	259591	500000	520000	5100000	1320000	680000	720000
Average	≤ 0 CFU/100 ml	33421	83%	59%	52%	17%	17%	190730	207553	476445	294621	86247	228235
% of Compliance		93%	83%	59%	52%	17%	17%	20%	23%	29%	29%	23%	29%
95 Percentile		275153	300680	500000	500000	567500	715500	500000	500000	5100000	476445	680000	86247
Nr of Samples		30	29	31	29	30	30	30	30	29	29	30	17

**ZEEKOEGAT
WASTE WATER TREATMENT WORKS**

1. INFLOW

	DESIGN CAPACITY	JUL '12	AUG '12	SEPT '12	OCT '12	NOV '12	DEC '12
FLOW:							
Total for the Month (M ³)		1496.26	1517.84	1720.29	1785.18	1638.44	1819.77
Daily Average (M ³ / day)	84,932 Ml / day	48,270	48,960	57,340	57,590	54,610	58,702

2. EFFLUENT DISCHARGE MONITORING

2.1 LABORATORY RESULTS (COMPOSITE SAMPLE)

Compliance Point

Date Sample Number	LICENSE LIMITS	JULY 2012		AUGUST 2012		SEPTEMBER 2012		OCTOBER 2012		NOVEMBER 2012		DEC 2012	
		10/07/2012	22/07/2012	16/08/2012	27/08/2012	12/09/2012	27/09/2012	09/10/2012	21/10/2012	16/11/2012	26/11/2012	13/12/2012	
pH	≥ 6.5 ≤ 8.5	7.67	7.57	7.53	7.5	7.58	7.66	7.35	7.46	7.48	7.33	7.38	
Electrical Conductivity (mS/m)	≤ 80mS/m	59.9	60.5	58.1	58.6	59	60.0	58	55.6	58	51.3	53.9	
Free & saline ammonia (as N) mg/l	≤ 1 mg/l	5.77	1.06	0.28	0.86	0.48	0.09	0.33	0.36	0.26	0.24	0.11	
Nitrate (as N) mg/l	≤ 6 mg/l	6.91	7.82	9.65	7.88	8.19	8.22	7.06	5.54	7.14	4.93	4.99	
Orthophosphate (as P) mg/l	≤ 0.9 mg/l	0.2	0.15	0.12	0.14	0.13	0.04	0.09	0.10	0.09	0.12	0.01	
Chemical Oxygen demand (as O) mg/l	≤ 50 mg/l	52	47	32	27	24	48	32	24	38	21	25	
Suspended solids mg/l	≤ 10 mg/l	10.8	12	4.8	4.8	2	14.4	6.8	4.4	17.6	2.8	4.4	

(Grab Sample) Time of day	LICENSE LIMITS	JULY 2012		AUGUST 2012		SEPTEMBER 2012		OCTOBER 2012		NOVEMBER 2012		DECEMBER 2012	
		am	pm	am	pm	am	pm	am	pm	am	pm	am	pm
Faecal Coliforms													
Minimum		0	0	0	0	0	0	0	0	0	0	0	0
Maximum		680	500000	260	1180	500000	500000	500000	500000	1500	1500	1520	1080
Average		82	34806	69	95	69434	50355	52337	22118	303	316	214	200
% of Compliance		100%	83%	100%	95%	89%	75%	69%	89%	69%	316	214	200
95 Percentile		220	300680	206	244	500000	500000	500000	1472	24	22	31	9
Nr of Samples		31	29	28	19	29	20	29	23	24	22	31	9