



Environmental Monitoring Report V1

Broadwater Power Plant 117 Baraang Drive Broadwater NSW

Licencee Cape Byron Management Pty Ltd
Address 117 Baraang Drive Broadwater NSW
EPL No 20425 <http://www.epa.nsw.gov.au/prpoeoapp/>

This data is published as required under section 66(6) of the *Protection of the Environment Operations Act 1997*

Sampling Point:

Licencee

Location

EPL No

Parameters Monitored

Frequency & Method

Limits

Monitoring Point 1 - No 12 Boiler Stack Emissions

Cape Byron Management Pty Ltd

Broadwater Cogeneration Power Plant

20425

<http://www.epa.nsw.gov.au/prpoeoapp/>

see individual parameters in table

Annually in accordance with EPA protocols

see individual parameters in table



			RESULTS TABLE			
			AE 13192	AE 13741	AE 14703	AE 15185
			16-Jul-20	15-Jul-21	15-Dec-22	13-Sep-23
			25-Aug-20	02-Aug-21	11-Jan-23	06-Oct-23
			27-Aug-20	13-Aug-21	25-Jan-23	07-Feb-24
Measured Parameters dry @ STP and corrected to 7% O ₂	Units	Concentration Limit				
Average stack gas temperature	°C	Not Applicable	108.0	88.0	98.0	80.0
Average velocity at sampling plane	m/s	Not Applicable	8.1	9.7	6.6	10.0
Gas Volumetric Flowrate	m ³ /sec	Not Applicable	20.9	47.8	20.5	64.0
Dry Gas Density	kg/m ³	Not Applicable	1.3	1.3	1.2	1.3
Molecular Weight of Stack Gases	g/g mole	Not Applicable	30.1	30.1	29.9	29.4
Moisture content	%	Not Applicable	26.7	20.1	13.1	18.3
Concentration of carbon dioxide	mg Drive Broadw	Not Applicable	10.6	11.0	9.3	4.5
Total Solid Particles	mg/m ³	100	70.7	42.7	61.0	75.0
Sulphuric Acid Mist & Sulphur Trioxide as SO ₃	mg/m ³	12	5.6	11.3	10.9	10.9
Nitrogen Oxides (NOx)	mg/m ³	500	368.0	270.0	266.0	442.0

117 Baraang Drive Broadwater NSW

Sampling Point:

Licencee
 Location
 EPL No
 Parameter/s Monitored
 Frequency & Method
 Limits

Monitoring Point 2 - No 1 Cogeneration Boiler Stack Emissions

Cape Byron Management Pty Ltd
 Broadwater Cogeneration Power Plant
 20425 <http://www.epa.nsw.gov.au/prpoeoapp/>
 see individual parameters in table
 Quarterly in accordance with EPA protocols
 see individual parameters in table



			RESULTS TABLE							
Report Number			AE 14555	AE 14703	AE 14762	AE 14903	AE 15072	AE 15185	AE15397	AE15490
Sampling Date			16-Sep-22	15-Dec-22	09-Feb-23	19-Apr-23	11-Jul-23	23-Nov-23	17-Jan-24	07-Mar-24
Date Received			03-Nov-22	11-Jan-23	20-Mar-23	05-May-23	14-Aug-23	29-Jan-24	11-Feb-24	16-Apr-24
Date Published			25-Jan-23	25-Jan-23	22-Mar-23	17-May-23	23-Aug-23	07-Feb-24	21-Feb-24	17-Apr-24
Measured Parameters dry @ STP and corrected to 7% O ₂	Units	Concentration Limit								
Average stack gas temperature	°C	Not Applicable	73.3	64.0	64.0	63.0	70.0	64.0	63.7	60.0
Average velocity at sampling plane	m/s	Not Applicable	16.7	15.1	23.9	16.5	16.9	8.1	20.1	14.8
Dry Gas Volumetric Flowrate	Nm ³ /sec	Not Applicable	67.0	61.7	103.6	67.7	67.7	68.4	85.1	64.4
Dry Gas Density	kg/Nm ³	Not Applicable	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Molecular Weight of Stack Gases	g/g mole	Not Applicable	28.8	30.1	30.0	29.9	30.0	29.9	29.8	29.8
Moisture content	%	Not Applicable	19.9	19.5	15.2	20.3	20.9	12.8	17.3	16.4
Concentration of carbon dioxide	%	Not Applicable	12.7	10.5	9.7	9.2	10.0	8.8	8.3	7.8
Total Solid Particles	mg/Nm ³	100	21.5	19.2	17.1	17.6	64.7	30.6	29.0	44.2
Sulphuric Acid Mist & Sulphur Trioxide as SO ₃	mg/Nm ³	12	0.9	11.9	11.97	11.96	7.00	5.50	7.90	1.80
Nitrogen Oxides (NO _x)	mg/Nm ³	500	247.0	279.0	136.0	171.0	299.0	229.0	172.0	215.0

Sampling Point: Monitoring Point 3 - Ambient Air Monitoring
Licencee: Cape Byron Management Pty Ltd
Location: Broadwater Cogeneration Power Plant
EPL No: 20425 <http://www.epa.nsw.gov.au/prpocoeapp/>
Parameters Monitored: PM10
Monitoring Frequency: Sampling for 24 hours every 6 Days when site is operating
Limits: Not Applicable
Comments: Laboratory Analysis



Date Sample Collected	Date Received	Date Published	Results (ug/m ³)	Notes
8-Aug-23	7-Sep-23	20-Sep-23	6.0	
14-Aug-23	7-Sep-23	20-Sep-23	24.8	
20-Aug-23	7-Sep-23	20-Sep-23	30.2	
26-Aug-23	7-Sep-23	20-Sep-23	9.2	
1-Sep-23	9-Oct-23	18-Oct-23	11.8	
7-Sep-23	9-Oct-23	18-Oct-23	18.5	
13-Sep-23	9-Oct-23	18-Oct-23	12.7	
19-Sep-23	9-Oct-23	18-Oct-23	23.0	
25-Sep-23	9-Oct-23	18-Oct-23	9.3	
1-Oct-23	7-Nov-23	15-Nov-23	11.8	
7-Oct-23	7-Nov-23	15-Nov-23	10.6	
13-Oct-23	7-Nov-23	15-Nov-23	25.8	
19-Oct-23	7-Nov-23	15-Nov-23	19.4	
25-Oct-23	7-Nov-23	15-Nov-23	35.7	
31-Oct-23	14-Dec-23	27-Dec-23	57.9	
6-Nov-23	14-Dec-23	27-Dec-23	6.8	
12-Nov-23	14-Dec-23	27-Dec-23	3.9	
18-Nov-23	14-Dec-23	27-Dec-23	12.6	
24-Nov-23	14-Dec-23	27-Dec-23	9.4	
30-Nov-23	19-Jan-24	24-Jan-24	N/A	paper not removed (see 6/12/23 results - for 12 day cycle)
6-Dec-23	19-Jan-24	24-Jan-24	14.3	
12-Dec-23	19-Jan-24	24-Jan-24	24.9	
18-Dec-23	19-Jan-24	24-Jan-24	19.7	
24-Dec-23	19-Jan-24	24-Jan-24	7.5	
30-Dec-23	19-Jan-24	24-Jan-24	13.6	
5-Jan-24	19-Jan-24	24-Jan-24	11.8	
11-Jan-24	15-Feb-24	21-Feb-24	20.6	
17-Jan-24	15-Feb-24	21-Feb-24	12.1	
23-Jan-24	15-Feb-24	21-Feb-24	21.5	
29-Jan-24	15-Feb-24	21-Feb-24	22.9	
4-Feb-24	15-Mar-24	20-Mar-24	N/A	results not received
10-Feb-24	15-Mar-24	20-Mar-24	16.5	
16-Feb-24	15-Mar-24	20-Mar-24	11.0	
22-Feb-24	15-Mar-24	20-Mar-24	11.8	
28-Feb-24	15-Mar-24	20-Mar-24	16.4	
5-Mar-24	18-Apr-24	1-May-24	13.6	
11-Mar-24	18-Apr-24	1-May-24	16.6	
17-Mar-24	18-Apr-24	1-May-24	4.9	
23-Mar-24	18-Apr-24	1-May-24	11.7	
29-Mar-24	18-Apr-24	1-May-24	7.8	
4-Apr-24	NR	1-May-24	N/A	
10-Apr-24	NR	1-May-24	N/A	
16-Apr-24	NR	1-May-24	N/A	
28-Apr-24	NR	1-May-24	N/A	

Sampling Point: Monitoring Point 3 - Ambient Air Monitoring
 Licencee Cape Byron Management Pty Ltd
 Location Broadwater Cogeneration Power Plant
 EPL No 20425 <http://www.epa.nsw.gov.au/prpoeoapp/>
 Parameters Monitored Particulates - Deposited Matter
 Monitoring Frequency Continuous with sample results extrapolated from sample period of 30 ± 2 days
 Limits Not Applicable
 Comments Laboratory Analysis



Date Sample Collected	Date Received	Date Published	Results (g/m ² /month)	Notes
5-Aug-02	11-Aug-21	13-Aug-21	0.77	
7-Sep-21	10-Sep-21	23-Sep-21	1.64	Large org. matter
7-Oct-21	19-Oct-21	22-Oct-21	0.80	Fine org. matter
7-Dec-21	15-Dec-21	15-Dec-21	2.20	Bug, large org. matter
1-Jan-22	21-Jan-22	28-Jan-22	1.54	Fine org. matter
1-Feb-22	NR	28-Feb-22	N/A	Bottles flooded
1-Mar-22	NR	31-Mar-22	N/A	Bottles flood damaged and not serviceable, new bottles set 20/04/2022
1-Apr-22	NR	30-Apr-22	N/A	New bottles placed on 20/4/22
5-May-22	11-May-22	1-Jun-22	0.13	
6-Jun-22	20-Jun-22	29-Jun-22	4.30	
5-Jul-22	8-Jul-22	27-Jul-22	0.19	
4-Aug-22	9-Aug-22	24-Aug-22	0.16	
5-Sep-22	12-Sep-22	21-Sep-22	0.41	
5-Oct-22	6-Oct-22	2-Nov-22	0.32	
7-Nov-22	11-Nov-22	30-Nov-22	0.20	
5-Dec-22	20-Dec-22	28-Dec-22	0.73	
9-Jan-23	12-Jan-23	11-Jan-23	0.63	
6-Feb-23	10-Feb-23	22-Feb-23	0.32	
6-Mar-23	9-Feb-23	22-Mar-23	0.73	
3-Apr-23	14-Apr-23	3-May-23	0.34	
8-May-23	12-May-23	31-May-23	0.28	
13-Jun-23	19-Jun-23	28-Jun-23	0.02	36 days exposure due to delivery delays
10-Jul-23	17-Jul-23	26-Jul-23	0.50	
7-Aug-23	15-Aug-23	23-Aug-23	0.66	
5-Sep-23	11-Sep-23	5-Oct-23	0.33	
4-Oct-23	19-Oct-23	1-Nov-23	1.08	
6-Nov-23	14-Nov-23	16-Nov-23	6.91	
5-Dec-23	13-Dec-23	10-Jan-24	0.67	
8-Jan-24	12-Jan-24	24-Jan-24	0.32	
5-Feb-24	9-Feb-24	21-Feb-24	0.15	
4-Mar-24	8-Mar-24	20-Mar-24	0.28	
8-Apr-24	12-Mar-24	17-Apr-24	0.59	

Sampling Point: Monitoring Point 4 - Ambient Air Monitoring

Licencee Cape Byron Management Pty Ltd
 Location Broadwater Cogeneration Power Plant
 EPL No 20425 <http://www.epa.nsw.gov.au/prpoeoapp/>
 Parameter Particulates - Deposited Matter
 Frequency Continuous with sample results extrapolated from sample period of 30 ± 2 days
 Limits Not Applicable
 Comments Laboratory Analysis



Date Sample Collected	Date Received	Date Published	Results (g/m ² /month)	Notes
2-Jul-21	9-Jul-21	16-Jul-21	0.97	Fine org. matter
5-Aug-21	11-Aug-21	13-Aug-21	1.02	
7-Sep-21	10-Sep-21	23-Sep-21	1.49	Large org. matter
7-Oct-21	19-Oct-21	22-Oct-21	1.01	Fine org. matter
7-Dec-21	15-Dec-21	15-Dec-21	0.59	Dirt, large org. matter
1-Jan-22	21-Jan-22	28-Jan-22	1.11	
01-Feb-22	NR	NR	N/A	Bottles flooded
01-Mar-22	NR	NR	N/A	Bottles flood damaged and not serviceable, new bottles set 20/04/2022
1-Apr-22	NR	30-Apr-22	N/A	New bottles placed on 20/4/22
5-May-22	11-May-22	1-Jun-22	0.23	
6-Jun-22	20-Jun-22	29-Jun-22	4.80	
5-Jul-22	8-Jul-22	27-Jul-22	0.33	
4-Aug-22	9-Aug-22	24-Aug-22	0.25	
5-Sep-22	12-Sep-22	21-Sep-22	0.41	
5-Oct-22	6-Oct-22	2-Nov-22	0.86	
7-Nov-22	11-Nov-22	30-Nov-22	0.11	
5-Dec-22	20-Dec-22	28-Dec-22	0.61	
9-Jan-23	12-Jan-23	11-Jan-23	0.51	
6-Feb-23	10-Feb-23	22-Feb-23	0.71	
6-Mar-23	9-Mar-23	22-Mar-23	1.49	
3-Apr-23	14-Apr-23	3-May-23	0.36	
8-May-23	12-May-23	31-May-23	0.55	
13-Jun-23	19-Jun-23	28-Jun-23	0.13	36 days exposure due to delivery delays
10-Jul-23	17-Jul-23	26-Jul-23	0.85	
7-Aug-23	15-Aug-23	23-Aug-23	1.24	
5-Sep-23	11-Sep-23	5-Oct-23	0.90	
4-Oct-23	19-Oct-23	1-Nov-23	4.20	
6-Nov-23	14-Nov-23	16-Nov-23	9.89	
5-Dec-23	13-Dec-23	10-Jan-24	0.54	
8-Jan-24	12-Jan-24	24-Jan-24	1.06	
5-Feb-24	9-Feb-24	21-Feb-24	0.16	
4-Mar-24	8-Mar-24	20-Mar-24	0.48	
8-Apr-24	12-Mar-24	17-Apr-24	0.51	

Sampling Point: Monitoring Point 5 - Ambient Air Monitoring
 Licence Cape Byron Management Pty Ltd
 Location Broadwater Power Plant Fuel Stockpile
 EPL No 20425 <http://www.epa.nsw.gov.au/prpoeoapp/>
 Parameters Monitored Particulates - Deposited Matter
 Monitoring Frequency Continuous with sample results extrapolated from sample period of 30 ± 2 days
 Limits Not Applicable
 Comments Laboratory Analysis



Date Sample Collected	Date Received	Date Published	Results (g/m ² /month)	Notes
1-Apr-22	NR	30-Apr-22	N/A	New bottles placed on 20/4/22
5-May-22	11-May-22	1-Jun-22	0.17	
6-Jun-22	20-Jun-22	29-Jun-22	5.00	
5-Jul-22	8-Jul-22	27-Jul-22	0.65	
4-Aug-22	9-Aug-22	24-Aug-22	0.08	
5-Sep-22	12-Sep-22	21-Sep-22	0.56	
5-Oct-22	6-Oct-22	2-Nov-22	1.33	
7-Nov-22	11-Nov-22	30-Nov-22	1.14	
5-Dec-22	20-Dec-22	28-Dec-22	1.50	
9-Jan-23	12-Jan-23	11-Jan-23	4.02	
6-Feb-23	10-Feb-23	22-Feb-23	1.62	
6-Mar-23	9-Feb-23	22-Mar-23	5.21	
3-Apr-23	14-Apr-23	3-May-23	1.23	
8-May-23	12-May-23	31-May-23	1.00	
13-Jun-23	19-Jun-23	28-Jun-23	0.02	36 days exposure due to delivery delays
10-Jul-23	17-Jul-23	26-Jul-23	0.81	
7-Aug-23	15-Aug-23	23-Aug-23	0.92	
5-Sep-23	11-Sep-23	5-Oct-23	0.36	
4-Oct-23	19-Oct-23	1-Nov-23	1.64	
6-Nov-23	14-Nov-23	16-Nov-23	7.18	
5-Dec-23	13-Dec-23	10-Jan-24	1.77	
8-Jan-24	12-Jan-24	24-Jan-24	1.10	
5-Feb-24	9-Feb-24	21-Feb-24	0.60	
4-Mar-24	8-Mar-24	20-Mar-24	0.44	
8-Apr-24	12-Mar-24	17-Apr-24	0.71	

Sampling Point: Monitoring Point 7 - O₂ Monitoring No 12 Boiler
 Licence: Cape Byron Management Pty Ltd
 Location: Broadwater Cogeneration Power Plant
 EPL No: 20425 [http://www.environment.nsw.gov.au/](http://www.environment.nsw.gov.au)
 Parameters Monitored: Oxygen
 Monitoring Frequency: Continuous Online Sampling
 Limit: No Limits Prescribed



The results in the table provide a fortnightly summary of the minimum, maximum and mean daily values for the period indicated

Comments

MONITORING PERIOD			Oxygen (%)			Notes
Date Start	Date Finish	Date Published	Minimum Value	Maximum Value	Mean Value	
4-Apr-22	17-Apr-22	30-Apr-22	No Data	No Data	No Data	Boiler damaged during flood event
18-Apr-22	1-May-22	30-Apr-22	No Data	No Data	No Data	Boiler damaged during flood event
2-May-22	15-May-22	18-May-22	No Data	No Data	No Data	Boiler damaged during flood event
16-May-22	29-May-22	1-Jun-22	No Data	No Data	No Data	Boiler damaged during flood event
30-May-22	12-Jun-22	15-Jun-22	No Data	No Data	No Data	Boiler damaged during flood event
13-Jun-22	26-Jun-22	29-Jun-22	No Data	No Data	No Data	Boiler damaged during flood event
27-Jun-22	10-Jul-22	13-Jul-22	No Data	No Data	No Data	Boiler damaged during flood event
11-Jul-22	24-Jul-22	27-Jul-22	No Data	No Data	No Data	Boiler damaged during flood event
25-Jul-22	7-Aug-22	10-Aug-22	No Data	No Data	No Data	Boiler damaged during flood event
8-Aug-22	21-Aug-22	24-Aug-22	No Data	No Data	No Data	Boiler damaged during flood event
22-Aug-22	4-Sep-22	7-Sep-22	No Data	No Data	No Data	Boiler damaged during flood event
5-Sep-22	18-Sep-22	21-Sep-22	No Data	No Data	No Data	Boiler damaged during flood event
19-Sep-22	2-Oct-22	5-Oct-22	No Data	No Data	No Data	Boiler damaged during flood event
3-Oct-22	16-Oct-22	19-Oct-22	No Data	No Data	No Data	Boiler damaged during flood event
17-Oct-22	30-Oct-22	2-Nov-22	No Data	No Data	No Data	Boiler damaged during flood event
31-Oct-22	13-Nov-22	16-Nov-22	No Data	No Data	No Data	Boiler damaged during flood event
14-Nov-22	27-Nov-22	17-Nov-22	No Data	No Data	No Data	Boiler damaged during flood event
28-Nov-22	11-Dec-22	23-Jan-23	0.21	21.0	14.40	
12-Dec-22	25-Dec-22	23-Jan-23	5.29	21.0	14.24	
26-Dec-22	8-Jan-23	23-Jan-23	4.98	21.0	18.59	
9-Jan-23	22-Jan-23	23-Jan-23	0.89	21.0	8.70	
23-Jan-23	5-Feb-23	8-Feb-23	1.86	20.6	19.59	Boiler offline 23/1/23
26-Jun-23	9-Jul-23	9-Aug-23	0.02	21.0	20.07	Boiler start-up 4/7/23; boiler offline 4/7/23, 5/7/23, 6/7/23, 7/7/23
10-Jul-23	23-Jul-23	9-Aug-23	0.02	21.0	12.37	Boiler offline 10/7/23 - 22/7/23
24-Jul-23	6-Aug-23	9-Aug-23	0.02	21.0	12.36	Boiler offline 5/8/23 - 8/8/23
7-Aug-23	20-Aug-23	23-Aug-23	0.02	21.0	14.12	Boiler offline 11/8/23 - 15/8/23, 20/8/23
21-Aug-23	3-Sep-23	6-Sep-23	0.02	21.0	13.71	Boiler offline 25/8/23 - 27/8/23, 2/8/23 - 4/8/23
4-Sep-23	17-Sep-23	20-Sep-23	0.00	21.0	14.71	Boiler offline 9/9/23 - 11/9/23, 15/9/23 - 17/9/23
18-Sep-23	1-Oct-23	5-Oct-23	0.00	21.0	13.87	Boiler offline 23/9/23 - 24/9/23, 30/9/23 - 2/10/23
2-Oct-23	15-Oct-23	18-Oct-23	0.02	21.0	17.63	Boiler offline 2/10/23, 7/10/23, 8/10/23, 14/10/23, 15/10/23
16-Oct-23	29-Oct-23	1-Nov-23	0.02	21.0	15.30	Boiler offline 19/10/23 - 23/10/23, 27/10/23 - 31/10/23
30-Oct-23	12-Nov-23	16-Nov-23	0.31	21.0	19.82	Boiler offline 1/11/23 - 16/11/23

Sampling Point: Monitoring Point 6 - O₂ Monitoring No 1 Cogeneration Boiler

Licencee Cape Byron Management Pty Ltd
 Location Broadwater Cogeneration Power Plant
 EPL No 20425 <http://www.epa.nsw.gov.au/prpoeoapp/>
 Parameters Monitored Oxygen
 Monitoring Frequency Continuous Online Sampling
 Limit No Limits Prescribed



The results in the table provide a fortnightly summary of the minimum, maximum and mean daily values for the period indicated

Comments

MONITORING PERIOD		Date Published	Oxygen (%)			Notes
Date Start	Date Finish		Minimum Value	Mean Value	Maximum Value	
10-Jul-23	23-Jul-23	26-Jul-23	0.20	3.93	20.9	Boiler offline 22/7/23
24-Jul-23	6-Aug-23	9-Aug-23	0.00	5.89	21.3	Boiler offline 30/7/23, 31/7/23, 5/8/23, 6/8/23
7-Aug-23	20-Aug-23	23-Aug-23	0.00	7.28	21.3	Boiler offline 7/8/23, 12/8/23, 13/8/23, 19/8/23, 20/8/23
21-Aug-23	3-Sep-23	6-Sep-23	0.00	6.62	21.3	Boiler offline 21/8/23, 26/8/23, 27/8/23, 3/9/23
4-Sep-23	17-Sep-23	20-Sep-23	0.00	4.99	21.2	Boiler offline 10/9/23, 11/9/23, 17/9/23
18-Sep-23	1-Oct-23	5-Oct-23	0.00	4.98	21.2	Boiler offline 28/9/23, 1/10/23
2-Oct-23	15-Oct-23	18-Oct-23	0.20	7.53	21.3	Boiler offline 2/10/23, 7/10/23, 8/10/23, 14/10/23, 15/10/23
16-Oct-23	29-Oct-23	1-Nov-23	0.00	7.32	21.3	Boiler offline 19/10/23 - 22/10/23, 28/10/23, 29/10/23
30-Oct-23	12-Nov-23	16-Nov-23	0.10	7.73	21.2	Boiler offline 4/11/23, 5/11/23, 7/11/23, 12/11/23
13-Nov-23	26-Nov-23	30-Nov-23	0.00	11.69	21.5	Boiler offline 13/11/23 - 17/11/23, 20/11/23, 25/11/23
27-Nov-23	10-Dec-23	13-Dec-23	0.00	8.81	21.3	Boiler offline 1/12/23 - 4/12/23
11-Dec-23	24-Dec-23	27-Dec-23	2.10	11.12	21.5	Boiler offline 21/12/23
25-Dec-23	7-Jan-24	10-Jan-24	1.00	16.77	21.8	Boiler offline 25/12/23 - 2/1/24, 5/1/24 - 7/1/24
8-Jan-24	21-Jan-24	24-Jan-24	3.00	8.75	21.2	Boiler offline 8/1/24, 12/1/24 - 14/1/24, 19/1/24 - 21/1/24
22-Jan-24	4-Feb-24	7-Feb-24	3.30	11.59	21.3	Boiler offline 22/1, 26/1-29/1, 31/1-4/2
5-Feb-24	18-Feb-24	21-Feb-24	2.30	8.76	21.2	Boiler offline 9/2 - 12/2, 16/2 - 18/2
19-Feb-24	3-Mar-24	6-Mar-24	1.40	9.43	21.4	Boiler offline 19/2, 23/2-27/2, 2/3-3/3
4-Mar-24	17-Mar-24	20-Mar-24	2.90	8.65	21.2	Boiler offline 4/3, 9/3-11/3, 15/3-17/3
18-Mar-24	31-Mar-24	3-Apr-24	2.00	11.18	21.2	Boiler offline 18/3, 19/3, 23/3 - 25/3, 28/3 - 31/3
1-Apr-24	14-Apr-24	17-Apr-24	0.00	21.35	21.6	Plant shutdown from 28/3 - 15/4
15-Apr-24	28-Apr-24	1-May-24	2.50	6.08	21.5	Boiler offline 15/4, 27/4, 28/4

Sampling Point: Monitoring Point 8 - Cogeneration Cooling Water Discharge
 Licencee: Cape Byron Management Pty Ltd
 Location: Broadwater Cogeneration Power Plant
 EPL No: 20425 <http://www.epa.nsw.gov.au/prpoeoapp/>
 Parameters Monitored: Temperature & Volume
 Monitoring Frequency: Continuous online
 Limits: Set Table
 Comments: No result may exceed the maximum limit.



MONITORING PERIOD			Temperature (°C)			Volume (kL/day)			Notes
Date Start	Date Finish	Date Published	Limit/s	Maximum	41	Limit/s	Maximum	155520	
			Min Temp	Mean Temp	Max Temp	Minimum Daily Discharge	Mean Daily Discharge	Maximum Daily Discharge	
12-Jun-23	25-Jun-23	28-Jun-23	16	22	29	68592	116416	137184	Boiler offline 12/6/23, 13/6/23, 17/6/23, 18/6/23, 19/6/23, 23/6/23, 24/6/23, 25/6/23
26-Jun-23	9-Jul-23	12-Jul-23	16	21	32	68592	118639	137184	Boiler offline 26/6/23, 29/6/23, 30/6/23, 1/7/23, 2/7/23, 6/7/23, 8/7/23, 9/7/23
10-Jul-23	23-Jul-23	26-Jul-23	17	26	32	134898	136993	137184	Boiler offline 22/7/23
24-Jul-23	6-Aug-23	9-Aug-23	18	27	33	106842	133417	137184	Boiler offline 30/7/23, 31/7/23, 5/8/23, 6/8/23
7-Aug-23	20-Aug-23	23-Aug-23	18	27	34	80310	127856	137184	Boiler offline 7/8/23, 12/8/23, 13/8/23, 19/8/23, 20/8/23
21-Aug-23	3-Sep-23	6-Sep-23	19	29	35	83501	127018	137184	Boiler offline 21/8/23, 28/8/23, 27/8/23, 3/9/23
4-Sep-23	17-Sep-23	20-Sep-23	21	31	36	117988	135426	137184	Boiler offline 10/9/23, 11/9/23, 17/9/23
18-Sep-23	1-Oct-23	5-Oct-23	21	32	37	128096	136235	137184	Boiler offline 28/9/23, 1/10/23
2-Oct-23	15-Oct-23	18-Oct-23	22	31	39	101126	134076	137184	Boiler offline 2/10/23, 7/10/23, 8/10/23, 14/10/23, 15/10/23
16-Oct-23	29-Oct-23	1-Nov-23	23	32	40	95314	131694	137184	
30-Oct-23	12-Nov-23	16-Nov-23	23	33	39	97934	130619	137184	Boiler offline 4/11/23, 5/11/23, 7/11/23, 12/11/23
13-Nov-23	26-Nov-23	30-Nov-23	24	31	37	8955	112531	137184	Boiler offline 13/11/23 - 17/11/23, 20/11/23, 25/11/23
27-Nov-23	10-Dec-23	13-Dec-23	26	35	45	68592	123513	137184	Boiler offline 1/12/23 - 4/12/23, temperature spike due to factory offline
11-Dec-23	24-Dec-23	27-Dec-23	27	34	40	98220	125865	137184	Boiler offline 21/12/23
25-Dec-23	7-Jan-24	10-Jan-24	24	30	38	67782	89135	137184	Boiler offline 25/12/23 - 2/1/24, 5/1/24 - 7/1/24
8-Jan-24	21-Jan-24	24-Jan-24	25	34	40	68592	125397	137184	Boiler offline 8/1/24, 12/1/24 - 14/1/24, 19/1/24 - 21/1/24
22-Jan-24	4-Feb-24	7-Feb-24	22	33	40	54064	114887	137184	Boiler offline 22/1, 26/1-29/1, 31/1-4/2
5-Feb-24	18-Feb-24	21-Feb-24	26	36	41	137184	137184	137184	
19-Feb-24	3-Mar-24	6-Mar-24	27	35	41	68592	124258	137184	Boiler offline 19/2, 23/2-27/2, 2/3-3/3
4-Mar-24	17-Mar-24	20-Mar-24	26	35	40	68592	122167	137184	Boiler offline 4/3, 9/3-11/3, 15/3-17/3
18-Mar-24	31-Mar-24	3-Apr-24	24	31	37	68592	119876	137184	Boiler offline 18/3, 19/3, 23/3 - 25/3, 28/3 - 31/3
1-Apr-24	14-Apr-24	17-Apr-24	23	25	26	0	0	0	Plant shutdown from 28/3 - 15/4
15-Apr-24	28-Apr-24	1-May-24	23	31	35	136327	137106	137184	Boiler offline 15/4, 27/4, 28/4

Sampling Point: Monitoring Point 9 - Cogeneration Cooling Water Inlet
 Licence: Cape Byron Management Pty Ltd
 Location: Broadwater Cogeneration Power Plant
 EPL No: 20425 <http://www.epa.nsw.gov.au/prpocapp/>
 Parameters Monitored: Temperature
 Monitoring Frequency: Continuous online (by calculation)
 Limits: Not Applicable - background data only



MONITORING PERIOD			Temperature (°C)			Volume (kL/day)			Notes
Date Start	Date Finish	Date Published	Minimum Background Temperature	Mean Background Temperature	Maximum Background Temperature	Minimum Daily Intake	Mean Daily Intake	Maximum Daily Intake	
24-Jul-23	6-Aug-23	9-Aug-23	17.5	19.0	20.6	106842	133417	137184	Boiler offline 30/7/23, 31/7/23, 5/8/23, 6/8/23
7-Aug-23	20-Aug-23	23-Aug-23	18.3	20.2	21.7	80310	127856	137184	Boiler offline 7/8/23, 12/8/23, 13/8/23, 19/8/23, 20/8/23
21-Aug-23	3-Sep-23	6-Sep-23	19.4	20.8	22.4	83501	127018	137184	Boiler offline 21/8/23, 26/8/23, 27/8/23, 3/9/23
4-Sep-23	17-Sep-23	20-Sep-23	14.6	22.3	23.9	117988	135426	137184	Boiler offline 10/9/23, 11/9/23, 17/9/23
18-Sep-23	1-Oct-23	5-Oct-23	22.0	23.2	24.7	128086	136235	137184	Boiler offline 28/9/23, 1/10/23
2-Oct-23	15-Oct-23	18-Oct-23	22.9	24.3	26.1	101126	134076	137184	Boiler offline 2/10/23, 7/10/23, 8/10/23, 14/10/23, 15/10/23
16-Oct-23	29-Oct-23	1-Nov-23	23.6	25.1	27.5	95314	131694	137184	Boiler offline 19/10/23 - 22/10/23, 28/10/23, 29/10/23
30-Oct-23	12-Nov-23	16-Nov-23	21.8	24.7	25.9	97934	130619	137184	Boiler offline 4/11/23, 5/11/23, 7/11/23, 12/11/23
13-Nov-23	26-Nov-23	30-Nov-23	20.2	27.4	50.0	8955	112531	137184	Boiler offline 13/11/23 - 17/11/23, 20/11/23, 25/11/23 - high temp due to factory shutdown with water sitting in pipe exposed to sun
27-Nov-23	10-Dec-23	13-Dec-23	26.5	28.4	83.9	68592	123513	137184	Boiler offline 1/12/23 - 4/12/23, temperature spike due to testing on transmitter
11-Dec-23	24-Dec-23	27-Dec-23	27.8	29.6	39.4	98220	125865	137184	Boiler offline 21/12/23
25-Dec-23	7-Jan-24	10-Jan-24	23.8	28.2	30.9	67782	89135	137184	Boiler offline 25/12/23 - 2/1/24, 5/1/24 - 7/1/24
8-Jan-24	21-Jan-24	24-Jan-24	25.3	27.7	29.2	68592	125397	137184	Boiler offline 8/1/24, 12/1/24 - 14/1/24, 19/1/24 - 21/1/24
22-Jan-24	4-Feb-24	7-Feb-24	22.0	29.3	49.3	54064	114887	137184	Boiler offline 22/1, 26/1-29/1, 31/1-4/2. High temp on 2/2 due to water drained from pipe.
5-Feb-24	18-Feb-24	21-Feb-24	27.2	29.6	31.2	137184	137184	137184	
19-Feb-24	3-Mar-24	6-Mar-24	27.9	29.2	30.2	68592	124258	137184	Boiler offline 19/2, 23/2-27/2, 2/3-3/3
4-Mar-24	17-Mar-24	20-Mar-24	27.0	28.2	29.8	68592	122167	137184	Boiler offline 4/3, 9/3-11/3, 15/3-17/3
18-Mar-24	31-Mar-24	3-Apr-24	22.5	26.6	28.4	68592	119876	137184	Boiler offline 18/3, 19/3, 23/3 - 25/3, 28/3 - 31/3
1-Apr-24	14-Apr-24	17-Apr-24	18.1	26.7	43.1	0	0	0	Plant shutdown from 28/3 - 15/4
15-Apr-24	28-Apr-24	1-May-24	21.4	23.7	25.8	136327	137106	137184	Boiler offline 15/4, 27/4, 28/4

Sampling Point: Monitoring Point 10 - Stockpile Sediment Pond West
 Licencee Cape Byron Management Pty Ltd
 Location Broadwater Power Plant Fuel Stockpile
 EPL No 20425 <http://www.epa.nsw.gov.au/prpoeoapp/>
 Parameter/s Monitored See Table
 Frequency & Method Monthly Grab Sample
 Limit/s None Prescribed



PARAMETERS MEASURED

Date Sampled	Date Received	Date Published	BOD ₅ (mg/L)	TSS (mg/L)	pH	Nitrogen (mg/L)	Phosphorus (mg/L)	Notes
27-Jul-21	2-Aug-21	13-Aug-21	5.1	72.0	6.5	1.1	1.2	
24-Aug-21	30-Aug-21	9-Sep-21	3.2	28.0	7.6	1.5	0.4	
28-Sep-21	7-Oct-21	8-Oct-21	1.5	11.0	7.0	1.0	0.5	
25-Oct-21	4-Nov-21	5-Nov-21	5.1	32.0	6.6	1.2	1.0	
9-Nov-21	19-Nov-21	23-Nov-21	3.0	15.0	6.8	0.6	0.8	
7-Dec-21	17-Dec-21	22-Dec-21	14.0	117.0	6.1	0.9	1.1	
31-Jan-22	NA	NA	NR	NR	NR	NR	NR	Flood affected operations
25-Feb-22	NA	NA	NR	NR	NR	NR	NR	Pond sample unable to be taken due to flooding in Feb
20-Mar-22	NA	NA	NR	NR	NR	NR	NR	Pond sample unable to be taken due to flooding in Feb
29-Apr-22	29-Apr-22	18-May-22	70.6	127.0	5.0	1.6	1.2	
18-May-22	26-May-22	1-Jun-22	7.7	23.0	6.1	1.3	0.8	
21-Jun-22	30-Jun-22	27-Jul-22	3.7	15.0	6.3	0.9	0.9	
22-Jul-22	2-Aug-22	10-Aug-22	4.2	44.0	6.2	0.9	0.9	
18-Aug-22	26-Aug-22	7-Sep-22	1.9	23.0	6.6	0.7	1.3	
15-Sep-22	26-Sep-22	5-Oct-22	2.2	10.0	5.8	1.4	1.3	
18-Oct-22	27-Oct-22	16-Nov-22	3.6	19.0	6.6	0.6	0.8	
21-Nov-22	1-Dec-22	14-Dec-22	2.3	5.0	7.0	0.8	0.9	
19-Dec-22	3-Jan-23	11-Jan-23	2.9	10.0	7.0	1.1	0.6	
18-Jan-23	27-Jan-23	8-Feb-23	1.8	2.0	6.9	0.6	0.6	
21-Feb-23	3-Mar-23	8-Mar-23	2.7	5.0	6.8	0.7	0.7	
21-Mar-23	31-Mar-23	5-Apr-23	2.3	23.0	6.4	0.7	0.9	
18-Apr-23	28-Apr-23	17-May-23	4.7	26.0	6.6	0.6	0.6	
18-May-23	1-Jun-23	14-Jun-23	8.5	235.0	6.2	0.7	1.0	
19-Jun-23	29-Jun-23	12-Jul-23	1.4	10.0	6.5	0.5	0.6	
18-Jul-23	1-Aug-23	9-Aug-23	2.6	10.0	6.6	0.4	0.4	
17-Aug-23	30-Aug-23	6-Sep-23	1.4	11.0	6.7	0.6	0.3	
18-Sep-23	17-Oct-23	18-Oct-23	<1	4.0	7.1	0.5	0.2	
17-Oct-23	23-Oct-23	1-Nov-23	2.1	8.0	7.1	0.6	0.2	
20-Nov-23	5-Dec-23	13-Dec-23	3.5	15.0	6.5	0.6	0.8	
19-Dec-23	5-Jan-24	10-Jan-24	0.3	18.0	6.7	0.5	0.6	
17-Jan-24	30-Jan-24	7-Feb-24	20.5	228.0	6.4	1.1	1.3	
19-Feb-24	29-Feb-24	6-Mar-24	5.9	46.0	6.6	0.8	0.9	
19-Mar-24	28-Mar-24	3-Apr-24	7.7	104.0	6.6	1.2	1.0	
16-Apr-24	NR	1-May-24	N/A	N/A	N/A	N/A	N/A	

Sampling Point: Monitoring Point 12 - Reverse Osmosis Sidestream
 Licencee Cape Byron Management Pty Ltd
 Location Broadwater Cogeneration Power Plant
 EPL No 20425 <http://www.epa.nsw.gov.au/prpoeoapp/>
 Parameters Measured See Table
 Frequency & Method Biannual Grab Sample
 Licence Limits Not Prescribed



Pollutants	Units	Date Sampled	Date Received	Date Published	Results	Notes
Aluminium	mg/l	13-Apr-21	19-Apr-21	22-Apr-21	0.695	
		28-Sep-21	07-Oct-21	08-Oct-21	0.205	
		06-Sep-22	07-Sep-22	05-Oct-22	0.449	
		04-Oct-22	26-Oct-22	02-Nov-22	0.584	
		03-Apr-23	21-Apr-23	03-May-23	0.693	
Ammonia	mg/l	03-Oct-23	16-Oct-23	18-Oct-23	0.325	
		13-Apr-21	19-Apr-21	22-Apr-21	0.680	
		28-Sep-21	07-Oct-21	08-Oct-21	0.292	
		06-Sep-22	07-Sep-22	05-Oct-22	0.998	
		04-Oct-22	26-Oct-22	02-Nov-22	0.116	
Arsenic	mg/l	03-Apr-23	21-Apr-23	03-May-23	0.751	
		03-Oct-23	16-Oct-23	18-Oct-23	0.038	
		13-Apr-21	19-Apr-21	22-Apr-21	0.003	
		28-Sep-21	07-Oct-21	08-Oct-21	0.001	
		06-Sep-22	07-Sep-22	05-Oct-22	0.003	
Barium	mg/l	04-Oct-22	26-Oct-22	02-Nov-22	0.002	
		03-Apr-23	21-Apr-23	03-May-23	0.003	
		03-Oct-23	16-Oct-23	18-Oct-23	0.002	
		13-Apr-21	19-Apr-21	22-Apr-21	0.118	
		28-Sep-21	07-Oct-21	08-Oct-21	0.078	
Bicarbonate	CaCO ₃ /kg	06-Sep-22	07-Sep-22	05-Oct-22	0.070	
		04-Oct-22	26-Oct-22	02-Nov-22	0.137	
		03-Apr-23	21-Apr-23	03-May-23	0.093	
		03-Oct-23	16-Oct-23	18-Oct-23	0.055	
		13-Apr-21	19-Apr-21	22-Apr-21	37	
Cadmium	mg/l	28-Sep-21	07-Oct-21	08-Oct-21	120	
		06-Sep-22	07-Sep-22	05-Oct-22	238	
		04-Oct-22	26-Oct-22	02-Nov-22	105	
		03-Apr-23	21-Apr-23	03-May-23	105	
		03-Oct-23	16-Oct-23	18-Oct-23	94	
Calcium	mg/l	13-Apr-21	19-Apr-21	22-Apr-21	<0.001	
		28-Sep-21	07-Oct-21	08-Oct-21	<0.001	
		06-Sep-22	07-Sep-22	05-Oct-22	<0.001	
		04-Oct-22	26-Oct-22	02-Nov-22	<0.001	
		03-Apr-23	21-Apr-23	03-May-23	<0.001	
Chloride	mg/l	03-Oct-23	16-Oct-23	18-Oct-23	<0.001	
		13-Apr-21	19-Apr-21	22-Apr-21	26.3	
		28-Sep-21	07-Oct-21	08-Oct-21	33.7	
		06-Sep-22	07-Sep-22	05-Oct-22	70.4	
		04-Oct-22	26-Oct-22	02-Nov-22	35.8	
Chromium	mg/l	03-Apr-23	21-Apr-23	03-May-23	36.0	
		03-Oct-23	16-Oct-23	18-Oct-23	43.6	
		13-Apr-21	19-Apr-21	22-Apr-21	2.206	
		28-Sep-21	07-Oct-21	08-Oct-21	1.389	
		06-Sep-22	07-Sep-22	05-Oct-22	108	
Conductivity	dS/m	04-Oct-22	26-Oct-22	02-Nov-22	213	
		03-Apr-23	21-Apr-23	03-May-23	261	
		03-Oct-23	16-Oct-23	18-Oct-23	232	
		13-Apr-21	19-Apr-21	22-Apr-21	0.001	
		28-Sep-21	07-Oct-21	08-Oct-21	<0.001	
Copper	mg/l	06-Sep-22	07-Sep-22	05-Oct-22	0.001	
		04-Oct-22	26-Oct-22	02-Nov-22	0.001	
		03-Apr-23	21-Apr-23	03-May-23	0.001	
		03-Oct-23	16-Oct-23	18-Oct-23	0.002	
		13-Apr-21	19-Apr-21	22-Apr-21	1.170	
Hardness (as calcium)	CaCO ₃ /kg	28-Sep-21	07-Oct-21	08-Oct-21	0.825	
		06-Sep-22	07-Sep-22	05-Oct-22	0.917	
		04-Oct-22	26-Oct-22	02-Nov-22	1.020	
		03-Apr-23	21-Apr-23	03-May-23	1.181	
		03-Oct-23	16-Oct-23	18-Oct-23	1.106	
Iron	mg/l	13-Apr-21	19-Apr-21	22-Apr-21	<0.001	
		28-Sep-21	07-Oct-21	08-Oct-21	<0.001	
		06-Sep-22	07-Sep-22	05-Oct-22	0.001	
		04-Oct-22	26-Oct-22	02-Nov-22	<0.001	
		03-Apr-23	21-Apr-23	03-May-23	<0.001	
Iron	mg/l	03-Oct-23	16-Oct-23	18-Oct-23	<0.001	
		13-Apr-21	19-Apr-21	22-Apr-21	142.124	
		28-Sep-21	07-Oct-21	08-Oct-21	33.7	
		06-Sep-22	07-Sep-22	05-Oct-22	241	
		04-Oct-22	26-Oct-22	02-Nov-22	36	
Iron	mg/l	03-Apr-23	21-Apr-23	03-May-23	178	
		03-Oct-23	16-Oct-23	18-Oct-23	189	
		13-Apr-21	19-Apr-21	22-Apr-21	7.673	
		28-Sep-21	07-Oct-21	08-Oct-21	1.35	
		06-Sep-22	07-Sep-22	05-Oct-22	6.77	

Sampling Point:

Licencee
 Location
 EPL No
 Parameters Measured
 Frequency & Method
 Licence Limits

Monitoring Point 12 - Reverse Osmosis Sidestream

Cape Byron Management Pty Ltd
 Broadwater Cogeneration Power Plant
 20425 <http://www.epa.nsw.gov.au/prpoeoapp/>
 See Table
 Biannual Grab Sample
 Not Prescribed



Pollutants	Units	Date Sampled	Date Received	Date Published	Results	Notes
		04-Oct-22	26-Oct-22	02-Nov-22	8.06	
		03-Apr-23	21-Apr-23	03-May-23	5.97	
		03-Oct-23	16-Oct-23	18-Oct-23	5.42	
Lead	mg/l	13-Apr-21	19-Apr-21	22-Apr-21	<0.001	
		28-Sep-21	07-Oct-21	08-Oct-21	<0.001	
		06-Sep-22	07-Sep-22	05-Oct-22	<0.001	
		04-Oct-22	26-Oct-22	02-Nov-22	<0.001	
		03-Apr-23	21-Apr-23	03-May-23	<0.001	
		03-Oct-23	16-Oct-23	18-Oct-23	<0.001	
Magnesium	mg/l	13-Apr-21	19-Apr-21	22-Apr-21	18.6	
		28-Sep-21	07-Oct-21	08-Oct-21	15.5	
		06-Sep-22	07-Sep-22	05-Oct-22	15.9	
		04-Oct-22	26-Oct-22	02-Nov-22	23.0	
		03-Apr-23	21-Apr-23	03-May-23	21.4	
		03-Oct-23	16-Oct-23	18-Oct-23	19.5	
Manganese	mg/l	13-Apr-21	19-Apr-21	22-Apr-21	0.154	
		28-Sep-21	07-Oct-21	08-Oct-21	0.046	
		06-Sep-22	07-Sep-22	05-Oct-22	0.078	
		04-Oct-22	26-Oct-22	02-Nov-22	0.110	
		03-Apr-23	21-Apr-23	03-May-23	0.107	
		03-Oct-23	16-Oct-23	18-Oct-23	0.046	
Mercury	mg/l	13-Apr-21	19-Apr-21	22-Apr-21	<0.0005	
		28-Sep-21	07-Oct-21	08-Oct-21	<0.0005	
		06-Sep-22	07-Sep-22	05-Oct-22	<0.0005	
		04-Oct-22	26-Oct-22	02-Nov-22	<0.0005	
		03-Apr-23	21-Apr-23	03-May-23	<0.0005	
		03-Oct-23	16-Oct-23	18-Oct-23	<0.0005	
Nickel	mg/l	13-Apr-21	19-Apr-21	22-Apr-21	0.002	
		28-Sep-21	07-Oct-21	08-Oct-21	<0.001	
		06-Sep-22	07-Sep-22	05-Oct-22	<0.001	
		04-Oct-22	26-Oct-22	02-Nov-22	<0.01	
		03-Apr-23	21-Apr-23	03-May-23	<0.001	
		03-Oct-23	16-Oct-23	18-Oct-23	<0.001	
Nitrate	mg/l	13-Apr-21	19-Apr-21	22-Apr-21	0.016	
		28-Sep-21	07-Oct-21	08-Oct-21	0.623	
		06-Sep-22	07-Sep-22	05-Oct-22	0.135	
		04-Oct-22	26-Oct-22	02-Nov-22	0.034	
		03-Apr-23	21-Apr-23	03-May-23	<0.05	
		03-Oct-23	16-Oct-23	18-Oct-23	<0.005	
Nitrite	mg/l	13-Apr-21	19-Apr-21	22-Apr-21	0.248	
		28-Sep-21	07-Oct-21	08-Oct-21	0.100	
		06-Sep-22	07-Sep-22	05-Oct-22	0.020	
		04-Oct-22	26-Oct-22	02-Nov-22	0.010	
		03-Apr-23	21-Apr-23	03-May-23	0.563	
		03-Oct-23	16-Oct-23	18-Oct-23	0.009	
Orthophosphate	mg/l	13-Apr-21	19-Apr-21	22-Apr-21	0.027	
		28-Sep-21	07-Oct-21	08-Oct-21	0.007	
		06-Sep-22	07-Sep-22	05-Oct-22	0.016	
		04-Oct-22	26-Oct-22	02-Nov-22	0.012	
		03-Apr-23	21-Apr-23	03-May-23	0.369	
		03-Oct-23	16-Oct-23	18-Oct-23	0.062	
Potassium	mg/l	13-Apr-21	19-Apr-21	22-Apr-21	8.177	
		28-Sep-21	07-Oct-21	08-Oct-21	11.0	
		06-Sep-22	07-Sep-22	05-Oct-22	14.7	
		04-Oct-22	26-Oct-22	02-Nov-22	12.6	
		03-Apr-23	21-Apr-23	03-May-23	21.0	
		03-Oct-23	16-Oct-23	18-Oct-23	14.1	
Selenium	mg/l	13-Apr-21	19-Apr-21	22-Apr-21	<0.002	
		28-Sep-21	07-Oct-21	08-Oct-21	<0.002	
		06-Sep-22	07-Sep-22	05-Oct-22	<0.002	
		04-Oct-22	26-Oct-22	02-Nov-22	<0.002	
		03-Apr-23	21-Apr-23	03-May-23	<0.002	
		03-Oct-23	16-Oct-23	18-Oct-23	<0.002	
Silica (total)	mg/l	13-Apr-21	19-Apr-21	22-Apr-21	23.467	
		28-Sep-21	07-Oct-21	08-Oct-21	20.4	
		06-Sep-22	07-Sep-22	05-Oct-22	30.1	
		04-Oct-22	26-Oct-22	02-Nov-22	29.4	
		03-Apr-23	21-Apr-23	03-May-23	26.9	
		03-Oct-23	16-Oct-23	18-Oct-23	25.8	
Silver	mg/l	13-Apr-21	19-Apr-21	22-Apr-21	<0.001	
		28-Sep-21	07-Oct-21	08-Oct-21	<0.001	
		06-Sep-22	07-Sep-22	05-Oct-22	<0.001	
		04-Oct-22	26-Oct-22	02-Nov-22	<0.001	
		03-Apr-23	21-Apr-23	03-May-23	<0.001	
		03-Oct-23	16-Oct-23	18-Oct-23	<0.001	

Sampling Point:

Licencee
 Location
 EPL No
 Parameters Measured
 Frequency & Method
 Licence Limits

Monitoring Point 12 - Reverse Osmosis Sidestream

Cape Byron Management Pty Ltd
 Broadwater Cogeneration Power Plant
 20425 <http://www.epa.nsw.gov.au/prpoeoapp/>
 See Table
 Biannual Grab Sample
 Not Prescribed



Pollutants	Units	Date Sampled	Date Received	Date Published	Results	Notes
Sodium	mg/l	13-Apr-21	19-Apr-21	22-Apr-21	175	
		28-Sep-21	07-Oct-21	08-Oct-21	113	
		06-Sep-22	07-Sep-22	05-Oct-22	108	
		04-Oct-22	26-Oct-22	02-Nov-22	157	
		03-Apr-23	21-Apr-23	03-May-23	152	
		03-Oct-23	16-Oct-23	18-Oct-23	178	
Sodium Adsorption Ratio	mg/l	13-Apr-21	19-Apr-21	22-Apr-21	6.394	
		28-Sep-21	07-Oct-21	08-Oct-21	4.0	
		06-Sep-22	07-Sep-22	05-Oct-22	3.0	
		04-Oct-22	26-Oct-22	02-Nov-22	5.0	
		03-Apr-23	21-Apr-23	03-May-23	4.9	
		03-Oct-23	16-Oct-23	18-Oct-23	5.6	
Sulfate	mg/l	13-Apr-21	19-Apr-21	22-Apr-21	115	
		28-Sep-21	07-Oct-21	08-Oct-21	87	
		06-Sep-22	07-Sep-22	05-Oct-22	67	
		04-Oct-22	26-Oct-22	02-Nov-22	92	
		03-Apr-23	21-Apr-23	03-May-23	109	
		03-Oct-23	16-Oct-23	18-Oct-23	177	
Total Dissolved Salts	mg/l	13-Apr-21	19-Apr-21	22-Apr-21	796	
		28-Sep-21	07-Oct-21	08-Oct-21	561	
		06-Sep-22	07-Sep-22	05-Oct-22	624	
		04-Oct-22	26-Oct-22	02-Nov-22	692	
		03-Apr-23	21-Apr-23	03-May-23	803	
		03-Oct-23	16-Oct-23	18-Oct-23	752	
Total Organic Carbon	mg/l	13-Apr-21	19-Apr-21	22-Apr-21	21.5	
		28-Sep-21	07-Oct-21	08-Oct-21	20.4	
		06-Sep-22	07-Sep-22	05-Oct-22	23.5	
		04-Oct-22	26-Oct-22	02-Nov-22	24.6	
		03-Apr-23	21-Apr-23	03-May-23	31.3	
		03-Oct-23	16-Oct-23	18-Oct-23	25.5	
Total Suspended Solids	mg/l	13-Apr-21	19-Apr-21	22-Apr-21	<1	
		28-Sep-21	07-Oct-21	08-Oct-21	<1	
		06-Sep-22	07-Sep-22	05-Oct-22	<1	
		04-Oct-22	26-Oct-22	02-Nov-22	<1	
		03-Apr-23	21-Apr-23	03-May-23	3	
		03-Oct-23	16-Oct-23	18-Oct-23	<1	
Zinc	mg/l	13-Apr-21	19-Apr-21	22-Apr-21	0.024	
		28-Sep-21	07-Oct-21	08-Oct-21	0.004	
		06-Sep-22	07-Sep-22	05-Oct-22	0.053	
		04-Oct-22	26-Oct-22	02-Nov-22	0.052	
		03-Apr-23	21-Apr-23	03-May-23	0.015	
		03-Oct-23	16-Oct-23	18-Oct-23	0.006	
pH		13-Apr-21	19-Apr-21	22-Apr-21	6.78	
		28-Sep-21	07-Oct-21	08-Oct-21	7.60	
		06-Sep-22	07-Sep-22	05-Oct-22	7.84	
		04-Oct-22	26-Oct-22	02-Nov-22	7.35	
		03-Apr-23	21-Apr-23	03-May-23	7.23	
		03-Oct-23	16-Oct-23	18-Oct-23	6.94	

Sampling Point: Monitoring Point 11 - Stockpile Sediment Pond East
 Licencee Cape Byron Management Pty Ltd
 Location Broadwater Power Plant Fuel Stockpile
 EPL No 20425 <http://www.epa.nsw.gov.au/prpoeoapp/>
 Parameter/s Monitored See Table
 Frequency & Method Monthly Grab Sample
 Limit/s None Prescribed



PARAMETERS MEASURED								
Date Sampled	Date Received	Date Published	BOD ₅ (mg/L)	TSS (mg/L)	pH	Nitrogen (mg/L)	Phosphorus (mg/L)	Notes
31-Jan-22	NA	NA	NR	NR	NR	NR	NR	Flood affected operations
25-Feb-22	NA	NA	NR	NR	NR	NR	NR	Pond sample unable to be taken due to flooding in Feb
20-Mar-22	NA	NA	NR	NR	NR	NR	NR	Pond sample unable to be taken due to flooding in Feb
29-Apr-22	10-May-22	18-May-22	4.2	4.0	7.2	0.9	0.2	
18-May-22	26-May-22	1-Jun-22	5.4	9.0	7.1	1.4	0.4	
21-Jun-22	30-Jun-22	27-Jul-22	3.2	8.0	7.2	1.1	0.3	
22-Jul-22	2-Aug-22	10-Aug-22	2.4	30.0	7.0	1.4	0.3	
18-Aug-22	26-Aug-22	7-Sep-22	5.2	23.0	7.2	1.8	0.6	
15-Sep-22	26-Sep-22	5-Oct-22	3.3	13.0	7.0	1.2	0.4	
18-Oct-22	27-Oct-22	16-Nov-22	4.3	12.0	6.9	1.0	0.4	
21-Nov-22	1-Dec-22	14-Dec-22	12.8	14.0	8.1	4.0	0.9	
19-Dec-22	3-Jan-23	11-Jan-23	11.5	105.0	8.0	4.2	0.9	
18-Jan-23	27-Jan-23	8-Feb-23	16.7	29.0	9.3	3.4	0.8	
21-Feb-23	3-Mar-23	8-Mar-23	5.1	17.0	7.6	2.3	0.6	
21-Mar-23	31-Mar-23	5-Apr-23	5.9	19.0	7.6	2.8	0.6	
18-Apr-23	28-Apr-23	17-May-23	7.1	12.0	7.4	1.8	0.3	
18-May-23	1-Jun-23	14-Jun-23	2.9	28.0	7.3	1.5	0.3	
19-Jun-23	29-Jun-23	12-Jul-23	3.7	27.0	7.3	1.9	0.3	
18-Jul-23	1-Aug-23	9-Aug-23	7.0	21.0	7.5	1.7	0.3	
17-Aug-23	30-Aug-23	6-Sep-23	21.4	34.0	6.9	2.2	0.5	
18-Sep-23	17-Oct-23	18-Oct-23	7.2	25.0	8.7	2.3	0.5	
17-Oct-23	23-Oct-23	1-Nov-23	27.7	52.0	9.9	6.0	1.0	
20-Nov-23	5-Dec-23	13-Dec-23	4.2	13.0	7.3	1.4	0.5	
19-Dec-23	5-Jan-24	10-Jan-24	4.7	16.0	7.8	1.5	0.6	
17-Jan-24	30-Jan-24	7-Feb-24	8.5	45.0	9.8	3.3	0.5	
19-Feb-24	29-Feb-24	6-Mar-24	4.9	14.0	8.1	1.8	0.4	
19-Mar-24	28-Mar-24	3-Apr-24	6.2	16.0	7.8	1.8	0.4	
16-Apr-24	NR	1-May-24	N/A	N/A	N/A	N/A	N/A	

Sampling Point:
 Licence
 Location
 EPL No
 Parameter/s Monitored
 Frequency & Method

Rain gauge
 Cape Byron Management Pty Ltd
 Broadwater Cogeneration Power Plant
 20425
 Rainfall
 Continuous Auto Sampler



TIPPING GAUGE CONTINUOUS RAINFALL MONITORING					
Period From		Period To		Daily Rain	
Date	Time	Date	Time	Total (mm)	Max Intensity (mm/min)
Monday, 1 January 2024	9:01am	Tuesday, 2 January 2024	9:00am	0	0
Tuesday, 2 January 2024	9:01am	Wednesday, 3 January 2024	9:00am	0	0
Wednesday, 3 January 2024	9:01am	Thursday, 4 January 2024	9:00am	2.6	0.2
Thursday, 4 January 2024	9:01am	Friday, 5 January 2024	9:00am	0.6	0.2
Friday, 5 January 2024	9:01am	Saturday, 6 January 2024	9:00am	1.4	0.4
Saturday, 6 January 2024	9:01am	Sunday, 7 January 2024	9:00am	3	0.4
Sunday, 7 January 2024	9:01am	Monday, 8 January 2024	9:00am	0	0
Monday, 8 January 2024	9:01am	Tuesday, 9 January 2024	9:00am	0	0
Tuesday, 9 January 2024	9:01am	Wednesday, 10 January 2024	9:00am	0	0
Wednesday, 10 January 2024	9:01am	Thursday, 11 January 2024	9:00am	0.2	0.2
Thursday, 11 January 2024	9:01am	Friday, 12 January 2024	9:00am	2.2	1
Friday, 12 January 2024	9:01am	Saturday, 13 January 2024	9:00am	4.6	0.6
Saturday, 13 January 2024	9:01am	Sunday, 14 January 2024	9:00am	0.2	0.2
Sunday, 14 January 2024	9:01am	Monday, 15 January 2024	9:00am	16	1.2
Monday, 15 January 2024	9:01am	Tuesday, 16 January 2024	9:00am	84.4	2
Tuesday, 16 January 2024	9:01am	Wednesday, 17 January 2024	9:00am	24	1.8
Wednesday, 17 January 2024	9:01am	Thursday, 18 January 2024	9:00am	4.6	0.4
Thursday, 18 January 2024	9:01am	Friday, 19 January 2024	9:00am	1	0.2
Friday, 19 January 2024	9:01am	Saturday, 20 January 2024	9:00am	10.2	0.8
Saturday, 20 January 2024	9:01am	Sunday, 21 January 2024	9:00am	0.2	0.2
Sunday, 21 January 2024	9:01am	Monday, 22 January 2024	9:00am	0	0
Monday, 22 January 2024	9:01am	Tuesday, 23 January 2024	9:00am	0.8	0.2
Tuesday, 23 January 2024	9:01am	Wednesday, 24 January 2024	9:00am	0.2	0.2
Wednesday, 24 January 2024	9:01am	Thursday, 25 January 2024	9:00am	0	0
Thursday, 25 January 2024	9:01am	Friday, 26 January 2024	9:00am	0	0
Friday, 26 January 2024	9:01am	Saturday, 27 January 2024	9:00am	0	0
Saturday, 27 January 2024	9:01am	Sunday, 28 January 2024	9:00am	44.4	2.2
Sunday, 28 January 2024	9:01am	Monday, 29 January 2024	9:00am	0.4	0.2
Monday, 29 January 2024	9:01am	Tuesday, 30 January 2024	9:00am	1.8	0.2
Tuesday, 30 January 2024	9:01am	Wednesday, 31 January 2024	9:00am	0	0
Wednesday, 31 January 2024	9:01am	Thursday, 1 February 2024	9:00am	0	0
Thursday, 1 February 2024	9:01am	Friday, 2 February 2024	9:00am	0	0
Friday, 2 February 2024	9:01am	Saturday, 3 February 2024	9:00am	0	0
Saturday, 3 February 2024	9:01am	Sunday, 4 February 2024	9:00am	0	0
Sunday, 4 February 2024	9:01am	Monday, 5 February 2024	9:00am	0	0
Monday, 5 February 2024	9:01am	Tuesday, 6 February 2024	9:00am	0	0
Tuesday, 6 February 2024	9:01am	Wednesday, 7 February 2024	9:00am	0	0
Wednesday, 7 February 2024	9:01am	Thursday, 8 February 2024	9:00am	18	0.6
Thursday, 8 February 2024	9:01am	Friday, 9 February 2024	9:00am	16.8	0.4
Friday, 9 February 2024	9:01am	Saturday, 10 February 2024	9:00am	2.2	0.6
Saturday, 10 February 2024	9:01am	Sunday, 11 February 2024	9:00am	7.6	0.8
Sunday, 11 February 2024	9:01am	Monday, 12 February 2024	9:00am	22.6	1
Monday, 12 February 2024	9:01am	Tuesday, 13 February 2024	9:00am	0	0
Tuesday, 13 February 2024	9:01am	Wednesday, 14 February 2024	9:00am	0	0
Wednesday, 14 February 2024	9:01am	Thursday, 15 February 2024	9:00am	0	0
Thursday, 15 February 2024	9:01am	Friday, 16 February 2024	9:00am	31	1.2
Friday, 16 February 2024	9:01am	Saturday, 17 February 2024	9:00am	8.2	0.2
Saturday, 17 February 2024	9:01am	Sunday, 18 February 2024	9:00am	0.2	0.2
Sunday, 18 February 2024	9:01am	Monday, 19 February 2024	9:00am	0	0
Monday, 19 February 2024	9:01am	Tuesday, 20 February 2024	9:00am	56.6	2
Tuesday, 20 February 2024	9:01am	Wednesday, 21 February 2024	9:00am	0	0
Wednesday, 21 February 2024	9:01am	Thursday, 22 February 2024	9:00am	0.2	0.2
Thursday, 22 February 2024	9:01am	Friday, 23 February 2024	9:00am	0	0
Friday, 23 February 2024	9:01am	Saturday, 24 February 2024	9:00am	0	0
Saturday, 24 February 2024	9:01am	Sunday, 25 February 2024	9:00am	8	0.4
Sunday, 25 February 2024	9:01am	Monday, 26 February 2024	9:00am	0	0
Monday, 26 February 2024	9:01am	Tuesday, 27 February 2024	9:00am	7.6	0.6
Tuesday, 27 February 2024	9:01am	Wednesday, 28 February 2024	9:00am	1.8	0.8
Wednesday, 28 February 2024	9:01am	Thursday, 29 February 2024	9:00am	0	0
Thursday, 29 February 2024	9:01am	Friday, 1 March 2024	9:00am	0	0
Friday, 1 March 2024	9:01am	Saturday, 2 March 2024	9:00am	0	0
Saturday, 2 March 2024	9:01am	Sunday, 3 March 2024	9:00am	1.2	0.2
Sunday, 3 March 2024	9:01am	Monday, 4 March 2024	9:00am	2.4	0.6
Monday, 4 March 2024	9:01am	Tuesday, 5 March 2024	9:00am	23.6	1
Tuesday, 5 March 2024	9:01am	Wednesday, 6 March 2024	9:00am	1.4	0.2
Wednesday, 6 March 2024	9:01am	Thursday, 7 March 2024	9:00am	0	0
Thursday, 7 March 2024	9:01am	Friday, 8 March 2024	9:00am	0	0
Friday, 8 March 2024	9:01am	Saturday, 9 March 2024	9:00am	3.2	0.8
Saturday, 9 March 2024	9:01am	Sunday, 10 March 2024	9:00am	16.6	2
Sunday, 10 March 2024	9:01am	Monday, 11 March 2024	9:00am	8	1.4
Monday, 11 March 2024	9:01am	Tuesday, 12 March 2024	9:00am	1.8	0.4
Tuesday, 12 March 2024	9:01am	Wednesday, 13 March 2024	9:00am	0.2	0.2
Wednesday, 13 March 2024	9:01am	Thursday, 14 March 2024	9:00am	0	0
Thursday, 14 March 2024	9:01am	Friday, 15 March 2024	9:00am	0.6	0.2
Friday, 15 March 2024	9:01am	Saturday, 16 March 2024	9:00am	3.4	0.2
Saturday, 16 March 2024	9:01am	Sunday, 17 March 2024	9:00am	40	1.4
Sunday, 17 March 2024	9:01am	Monday, 18 March 2024	9:00am	1.6	0.2
Monday, 18 March 2024	9:01am	Tuesday, 19 March 2024	9:00am	15.4	1
Tuesday, 19 March 2024	9:01am	Wednesday, 20 March 2024	9:00am	0.8	0.2
Wednesday, 20 March 2024	9:01am	Thursday, 21 March 2024	9:00am	20.6	0.8
Thursday, 21 March 2024	9:01am	Friday, 22 March 2024	9:00am	3	0.2
Friday, 22 March 2024	9:01am	Saturday, 23 March 2024	9:00am	0.2	0.2
Saturday, 23 March 2024	9:01am	Sunday, 24 March 2024	9:00am	0.2	0.2
Sunday, 24 March 2024	9:01am	Monday, 25 March 2024	9:00am	2.6	0.2
Monday, 25 March 2024	9:01am	Tuesday, 26 March 2024	9:00am	23	0.6
Tuesday, 26 March 2024	9:01am	Wednesday, 27 March 2024	9:00am	42.8	0.6
Wednesday, 27 March 2024	9:01am	Thursday, 28 March 2024	9:00am	2.2	0.4
Thursday, 28 March 2024	9:01am	Friday, 29 March 2024	9:00am	2	1
Friday, 29 March 2024	9:01am	Saturday, 30 March 2024	9:00am	2.2	0.6
Saturday, 30 March 2024	9:01am	Sunday, 31 March 2024	9:00am	0	0
Sunday, 31 March 2024	9:01am	Monday, 1 April 2024	9:00am	0	0
Monday, 1 April 2024	9:01am	Tuesday, 2 April 2024	9:00am	0	0
Tuesday, 2 April 2024	9:01am	Wednesday, 3 April 2024	9:00am	0.2	0.2
Wednesday, 3 April 2024	9:01am	Thursday, 4 April 2024	9:00am	226	2.4
Thursday, 4 April 2024	9:01am	Friday, 5 April 2024	9:00am	95.6	1.6
Friday, 5 April 2024	9:01am	Saturday, 6 April 2024	9:00am	6.8	0.6
Saturday, 6 April 2024	9:01am	Sunday, 7 April 2024	9:00am	15.2	0.6
Sunday, 7 April 2024	9:01am	Monday, 8 April 2024	9:00am	0	0.2
Monday, 8 April 2024	9:01am	Tuesday, 9 April 2024	9:00am	0.2	0.2
Tuesday, 9 April 2024	9:01am	Wednesday, 10 April 2024	9:00am	0	0
Wednesday, 10 April 2024	9:01am	Thursday, 11 April 2024	9:00am	0	0
Thursday, 11 April 2024	9:01am	Friday, 12 April 2024	9:00am	0	0
Friday, 12 April 2024	9:01am	Saturday, 13 April 2024	9:00am	0	0
Saturday, 13 April 2024	9:01am	Sunday, 14 April 2024	9:00am	0	0
Sunday, 14 April 2024	9:01am	Monday, 15 April 2024	9:00am	0	0
Monday, 15 April 2024	9:01am	Tuesday, 16 April 2024	9:00am	0	0
Tuesday, 16 April 2024	9:01am	Wednesday, 17 April 2024	9:00am	0.2	0.2
Wednesday, 17 April 2024	9:01am	Thursday, 18 April 2024	9:00am	0	0
Thursday, 18 April 2024	9:01am	Friday, 19 April 2024	9:00am	6	0.4
Friday, 19 April 2024	9:01am	Saturday, 20 April 2024	9:00am	1.6	0.2
Saturday, 20 April 2024	9:01am	Sunday, 21 April 2024	9:00am	78.2	1.6
Sunday, 21 April 2024	9:01am	Monday, 22 April 2024	9:00am	5.4	0.4
Monday, 22 April 2024	9:01am	Tuesday, 23 April 2024	9:00am	8.4	0.6

Sampling Point:
 Licence
 Location
 EPL No
 Parameter/s Monitored
 Frequency & Method

Rain gauge
 Cape Byron Management Pty Ltd
 Broadwater Cogeneration Power Plant
 20425
 Rainfall
 Continuous Auto Sampler



TIPPING GAUGE CONTINUOUS RAINFALL MONITORING					
Period From		Period To		Daily Rain	
Date	Time	Date	Time	Total (mm)	Max Intensity (mm/min)
Tuesday, 23 April 2024	9:01am	Wednesday, 24 April 2024	9:00am	1.6	0.2
Wednesday, 24 April 2024	9:01am	Thursday, 25 April 2024	9:00am	1.8	1.8
Thursday, 25 April 2024	9:01am	Friday, 26 April 2024	9:00am	14.6	1.2
Friday, 26 April 2024	9:01am	Saturday, 27 April 2024	9:00am	4.8	0.6
Saturday, 27 April 2024	9:01am	Sunday, 28 April 2024	9:00am	12.6	0.8
Sunday, 28 April 2024	9:01am	Monday, 29 April 2024	9:00am	16.2	0.8
Monday, 29 April 2024	9:01am	Tuesday, 30 April 2024	9:00am	0	0
Tuesday, 30 April 2024	9:01am	Wednesday, 1 May 2024	9:00am	N/A	N/A

Licencee Cape Byron Management Pty Ltd
Location Broadwater Cogeneration Power Plant
EPL No 20425



CORRECTIONS LOG							
Date Sampled	Monitoring Point	Pollutant/Parameter	Original Data	Corrected Data	Date Corrected	Date Originally Published	Reason
01-Jul-21	3	PM10	<0.1	5.0	23-Sep-21	13-Aug-21	Sample and bag mixed up
31-Jul-21	3	PM10	5.0	11.9	23-Sep-21	13-Aug-21	Sample and bag mixed up
20/3/23	9	Cogen CW in	0.2	21.5	04-Jul-23	20/3/23	Analyser offline
3-Apr-23	9	Mean daily intake	1196474.0	119647	04-Jul-23	3-Apr-23	V2

117 Baraang Drive Broadwater NSW