

**Environmental Monitoring Report  
Broadwater Sugar Mill  
117 Baraang Drive, Broadwater, NSW**



*100%  
Locally grown  
Australian owned  
Certified sustainable*

Licencee NSW Sugar Milling Co-operative Ltd and  
Manildra Stockfeeds (Manufacturing) Pty Ltd  
Address Suite 1, Level 1, Cnr Martin & River Streets Ballina NSW 2478  
EPL No 172 <http://www.epa.nsw.gov.au/prpoeoapp/>

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

**EPA ENVIRONMENTAL MONITORING SUMMARY REPORT**

Last Published: 14/12/2021

Licence: Manildra Harwood Sugars T/As Sunshine Sugar

Location: Broadwater Sugar Mill

Address: 117 Pacific Highway, Broadwater

EPL No.: 172

Limits: 90% of sample results must be below the prescribed 90<sup>th</sup> percentile limit. Max limit is the maximum permissible discharge value. n/a = not applicable

> bgd: The results of the concentrations for the parameters BOD and TSS at point 2 are reported as the level above background. The values are determined by subtracting background monitoring results at point 3 from the values of monitoring at point 4.

Annual Summary Period: 14-Dec-20 14-Dec-21  
 2020 Crush Start Date: 24-Jun-20 2020 End Date: 20-Nov-20  
 2021 Crush Start Date: 07-Jun-21 2021 End Date: TBA

The mill operates seasonally. No data is reported between seasons as no cooling water discharges occur.



Monitoring Point ID	Source	Parameter	Sampling Frequency	Unit	Samples Required	Limits			Samples Obtained	RESULTS			Exceedances	
						Min	90%	Max		Min	Mean	Max	90%	Max
2	Cooling Water Discharge	BOD <sub>5</sub>	Fortnightly Composite	mg/L	12	n/a	45	50	20	10.0	25.7	42.1	No	0
2	Cooling Water Discharge	TSS	Fortnightly Composite	mg/L	12	n/a	20	25	20	-13.0	-3.1	4.0	No	0
2	Cooling Water Discharge	pH	Fortnightly Representative	pH	12	6.5	n/a	8.5	20	7.3	7.4	8.2	-	0
2	Cooling Water Discharge	Temperature	Fortnightly Representative	°C	12	n/a	45	50	20	5.6	9.8	13.9	No	0
2	Cooling Water Discharge	Volume	Continuous	kl/day	Continuous	n/a	n/a	85,000	Continuous	0	43660	70004	-	0
3	River Water - Background	BOD <sub>5</sub>	Fortnightly Composite	mg/L	12	n/a	n/a	n/a	20	1.0	1.9	5.0	-	-
3	River Water - Background	TSS	Fortnightly Composite	mg/L	12	n/a	n/a	n/a	20	7.0	22.5	43.0	-	-
3	River Water - Background	pH	Fortnightly Representative	pH	12	n/a	n/a	n/a	20	7.5	7.6	7.9	-	-
3	River Water - Background	Temperature	Fortnightly Representative	°C	12	n/a	n/a	n/a	20	17.1	19.3	23.1	-	-
4	Mill Torri Drain	BOD <sub>5</sub>	Fortnightly Composite	mg/L	12	n/a	n/a	n/a	20	15.0	28.2	45.0	-	-
4	Mill Torri Drain	TSS	Fortnightly Composite	mg/L	12	n/a	n/a	n/a	20	6.0	19.2	43.0	-	-
4	Mill Torri Drain	pH	Fortnightly Representative	pH	12	n/a	n/a	n/a	20	7.3	7.5	8.2	-	-
4	Mill Torri Drain	Temperature	Fortnightly Representative	°C	12	n/a	n/a	n/a	20	23.9	29.2	35.6	-	-

**Sampling Point: Monitoring Point 2 - Mill Process and Cooling Water Discharge**

Licencee Manildra Harwood Sugars  
 Location 117 Pacific Highway, Broadwater  
 EPL No 172  
 Parameters Monitored **Biochemical Oxygen Demand and Total Suspended Solids (mg/L)**  
 Frequency & Method Fortnightly Composite  
 Limit/s See table



Comments Percentile limit A 90 percentile limit means 90% of results must be below this prescribed value. Maximum limit is the maximum permissible discharge value

> bgd: Means the concentration of a relevant parameter above background levels over the corresponding parameters in the discharge. The results are determined from subtracting background monitoring results at point 3 from the results of monitoring at point 4. The values in the table are provided as the level above background

Date Sampled	Date Results Obtained	Date Published	Licence Limits	BOD <sub>5</sub> (mg/L)	TSS (mg/L)	Notes
			90 <sup>th</sup> Percentile Maximum	45>bgd 50>bgd	20>bgd 25>bgd	
05-Sep-17	11-Sep-17	15-Sep-17		33.5	-14	
12-Sep-17	17-Sep-17	20-Oct-17		26.2	-5	
19-Sep-17	25-Sep-17	20-Oct-17		22.8	-2	
26-Sep-17	06-Oct-17	20-Oct-17		26.1	-4	
04-Oct-17	16-Oct-17	20-Oct-17		17.8	-5	
11-Oct-17	20-Oct-17	24-Nov-17		31.7	0	
01-Nov-17	13-Nov-17	24-Nov-17		25.0	13	
08-Nov-17	17-Nov-17	24-Nov-17		48.3	-4	
17-Nov-17	24-Nov-17	24-Nov-17		18.0	-12	
22-Nov-17	29-Nov-17	15-Dec-17		34.3	-6	
29-Nov-17	06-Dec-17	15-Dec-17		22.8	-6	Season ended 5/12
13-Jun-18	21-Jun-18	13-Jul-18		15.0	2	
15-Jun-18	22-Jun-18	13-Jul-18		30.7	-18	
21-Jun-18	29-Jun-18	13-Jul-18		34.6	-9	
28-Jun-18	09-Jul-18	13-Jul-18		36.4	-5	
03-Jul-18	11-Jul-18	22-Aug-18		28.9	-1	
10-Jul-18	16-Jul-18	22-Aug-18		32.0	1	
17-Jul-18	25-Jul-18	22-Aug-18		25.9	-9	
26-Jul-18	02-Aug-18	22-Aug-18		37.0	13	
31-Jul-18	09-Aug-18	22-Aug-18		27.0	3	
10-Aug-18	23-Aug-18	26-Oct-18		60.5	-8	
14-Aug-18	23-Aug-18	26-Oct-18		55.1	-6	Mill breakdown 3-7th resulting in processing of old burnt cane. Natural fermentation increased ethanol in vapour stream
24-Aug-18	31-Aug-18	26-Oct-18		36.5	-2	
29-Aug-18	06-Sep-18	26-Oct-18		25.8	-4	
04-Sep-18	12-Sep-18	26-Oct-18		27.9	-4	
14-Sep-18	25-Sep-18	26-Oct-18		38.5	-1	
18-Sep-18	25-Sep-18	26-Oct-18		32.0	-1	
27-Sep-18	03-Oct-18	26-Oct-18		41.4	-10	
02-Oct-18	10-Oct-18	26-Oct-18		34.3	-8	
12-Oct-18	30-Oct-18	14-Dec-18		42.6	-7	
26-Oct-18	31-Oct-18	14-Dec-18		34.2	3	
30-Oct-18	07-Nov-18	14-Dec-18		34.6	-4	
06-Nov-18	13-Nov-18	14-Dec-18		32.7	-3	
13-Nov-18	19-Nov-18	14-Dec-18		33.6	-11	
23-Nov-18	29-Nov-18	19-Feb-19		23.0	-37	
22-Jul-19	29-Jul-19	08-Aug-19		25.2	-7	
30-Jul-19	06-Aug-19	08-Aug-19		24.7	-4	
06-Aug-19	13-Aug-19	12-Sep-19		10.3	-1	
14-Aug-19	22-Aug-19	12-Sep-19		21.2	-3	
20-Aug-19	27-Aug-19	12-Sep-19		28.4	-3	
27-Aug-19	02-Sep-19	12-Sep-19		69.5	-2	Cape Byron No1 Boiler blew superheater tube leading to crash stop and thereafter processing of some deteriorated cane
03-Sep-19	09-Sep-19	12-Sep-19		29.3	12	
12-Sep-19	18-Sep-19	10-Oct-19		35.6	-4	
17-Sep-19	23-Sep-19	10-Oct-19		37.8	-5	
24-Sep-19	30-Sep-19	10-Oct-19		35.0	-5	
01-Oct-19	09-Oct-19	14-Nov-19		29.8	-15	
08-Oct-19	15-Oct-19	14-Nov-19		26.0	-2	
15-Oct-19	22-Oct-19	14-Nov-19		15.0	9	
22-Oct-19	30-Oct-19	14-Nov-19		36.0	-3	
31-Oct-19	06-Nov-19	14-Nov-19		26.7	-20	
05-Nov-19	12-Nov-19	14-Nov-19		21.6	-5	
12-Nov-19	21-Nov-19	12-Dec-19		12.4	-7	
19-Nov-19	26-Nov-19	12-Dec-19		16.7	-1	Season End 22/11
07-Jul-20	14-Jul-20	13-Aug-20		16.3	2	
16-Jul-20	23-Jul-20	13-Aug-20		43.0	-2	
20-Jul-20	27-Jul-20	13-Aug-20		20.1	-1	
23-Jul-20	30-Jul-20	13-Aug-20		18.0	-14	
05-Aug-20	17-Aug-20	10-Sep-20		26.7	-9	
07-Aug-20	13-Aug-20	10-Sep-20		21.4	0	
11-Aug-20	17-Aug-20	10-Sep-20		19.5	1	
25-Aug-20	31-Aug-20	10-Sep-20		33.5	-9	
27-Aug-20	02-Sep-20	10-Sep-20		40.7	2	
01-Sep-20	10-Sep-20	10-Sep-20		37.7	-29	
08-Sep-20	15-Sep-20	13-Oct-20		32.6	-9	
10-Sep-20	15-Sep-20	13-Oct-20		32.7	-7	
16-Sep-20	22-Sep-20	13-Oct-20		24.9	-11	
23-Sep-20	29-Sep-20	13-Oct-20		20.6	-10	
28-Sep-20	06-Oct-20	13-Oct-20		18.7	-9	
06-Oct-20	14-Oct-20	13-Nov-20		28.1	-9	
13-Oct-20	20-Oct-20	13-Nov-20		29.0	0	
22-Oct-20	28-Oct-20	13-Nov-20		22.3	-22	
27-Oct-20	10-Nov-20	13-Nov-20		23.6	7	
03-Nov-20	10-Nov-20	13-Nov-20		17.9	-33	

**Sampling Point: Monitoring Point 2 - Mill Process and Cooling Water Discharge**

Licencee Manildra Harwood Sugars  
 Location 117 Pacific Highway, Broadwater  
 EPL No 172

Parameters Monitored **Biochemical Oxygen Demand and Total Suspended Solids (mg/L)**

Frequency & Method Fortnightly Composite

Limit/s See table



Comments Percentile limit A 90 percentile limit means 90% of results must be below this prescribed value. Maximum limit is the maximum permissible discharge value

> bgd: Means the concentration of a relevant parameter above background levels over the corresponding parameters in the discharge. The results are determined from subtracting background monitoring results at point 3 from the results of monitoring at point 4. The values in the table are provided as the level above background

Date Sampled	Date Results Obtained	Date Published	Licence Limits	BOD <sub>5</sub> (mg/L)	TSS (mg/L)	Notes
			90 <sup>th</sup> Percentile	45>bgd	20>bgd	
			Maximum	50>bgd	25>bgd	
10-Nov-20	17-Oct-20	10-Dec-20		18.1	-20	
17-Nov-20	24-Nov-20	10-Dec-20		10.3	-22	Crushing Season Ended 20/11/20
10-Jun-21	17-Jun-21	09-Jul-21		10.0	-7	
15-Jun-21	22-Jun-21	09-Jul-21		22.2	2	
22-Jun-21	29-Jun-21	09-Jul-21		17.4	-2	
29-Jun-21	05-Jul-21	09-Jul-21		20.6	-5	
13-Jul-21	20-Jul-21	13-Aug-21		14.1	-5	
15-Jul-21	22-Jul-21	13-Aug-21		34.2	-1	
20-Jul-21	26-Jul-21	13-Aug-21		13.5	-4	
27-Jul-21	02-Aug-21	13-Aug-21		19.3	-4	
10-Aug-21	16-Aug-21	10-Sep-21		18.4	-3	
12-Aug-21	18-Aug-21	10-Sep-21		34.2	-6	
17-Aug-21	24-Aug-21	10-Sep-21		24.3	0	
24-Aug-21	31-Aug-21	10-Sep-21		24.5	4	
02-Sep-21	07-Sep-21	10-Sep-21		42.1	-1	
07-Sep-21	14-Sep-21	13-Oct-21		28.0	-13	
14-Sep-21	21-Sep-21	13-Oct-21		33.5	-5	
21-Sep-21	28-Sep-21	13-Oct-21		22.8	0	
28-Sep-21	08-Oct-21	13-Oct-21		37.7	2	
05-Oct-21	11-Oct-21	13-Oct-21		33.0	-5	
12-Oct-21	19-Oct-21	12-Nov-21		28.2	-11	
19-Oct-21	25-Oct-21	12-Nov-21		36.0	2	
26-Oct-21	03-Nov-21	12-Nov-21		32.6	-4	
02-Nov-21	09-Nov-21	12-Nov-21		32.7	-7	

**Sampling Point: Monitoring Point 2 - Mill Process and Cooling Water Discharge**

Licencee: Manildra Harwood Sugars  
 Location: 117 Pacific Highway, Broadwater  
 EPL No: 172  
 Parameters Monitored: pH and Temperature (°C)  
 Frequency & Method: Fortnightly Representative Sample.  
 Limit/s: See table



Comments: Percentile limits: A 90 percentile limit means 90% of results must be below this prescribed value. Maximum limit is the maximum permissible discharge value

Date Sampled	Date Published	Licence Limits	pH	Temperature (°C)	Notes
		90 <sup>th</sup> Percentile		45	
		Maximum	6.5 - 8.5	50	
5-Sep-17	15-Sep-17		7.3	16	
12-Sep-17	20-Oct-17		7.6	16	
19-Sep-17	20-Oct-17		7.5	14	
26-Sep-17	20-Oct-17		7.7	2	
3-Oct-17	20-Oct-17		7.6	18	
11-Oct-17	24-Nov-17		7.3	12	
1-Nov-17	24-Nov-17		7.0	13	
8-Nov-17	24-Nov-17		6.8	2	
17-Nov-17	24-Nov-17		6.7	11	
22-Nov-17	15-Dec-17		7.5	17	
29-Nov-17	15-Dec-17		7.7	14	
13-Jun-18	13-Jul-18		6.9	14	
15-Jun-18	13-Jul-18		7.0	12	
21-Jun-18	13-Jul-18		7.1	15	
28-Jun-18	13-Jul-18		7.2	9	
3-Jul-18	13-Jul-18		7.3	13	
10-Jul-18	22-Aug-18		7.3	17	
17-Jul-18	22-Aug-18		7.4	17	
26-Jul-18	22-Aug-18		7.1	16	
31-Jul-18	22-Aug-18		7.4	11	
10-Aug-18	26-Oct-18		7.2	12	
14-Aug-18	26-Oct-18		7.4	11	
24-Aug-18	26-Oct-18		7.3	11	
29-Aug-18	26-Oct-18		7.3	9	
4-Sep-18	26-Oct-18		7.1	16	
14-Sep-18	26-Oct-18		7.3	18	
18-Sep-18	26-Oct-18		7.2	14	
27-Sep-18	26-Oct-18		7.2	16	
2-Oct-18	26-Oct-18		7.2	11	
12-Oct-18	14-Dec-18		7.4	13	
26-Oct-18	14-Dec-18		7.0	7	
30-Oct-18	14-Dec-18		7.0	7	
6-Nov-18	14-Dec-18		6.8	10	
13-Nov-18	14-Dec-18		7.2	9	
23-Nov-18	19-Feb-19		7.1	9	
22-Jul-19	08-Aug-19		6.5	9	
30-Jul-19	08-Aug-19		6.8	6	
6-Aug-19	12-Sep-19		7.4	5	
14-Aug-19	12-Sep-19		6.7	13	
20-Aug-19	12-Sep-19		6.9	11	
27-Aug-19	12-Sep-19		7.1	15	
3-Sep-19	12-Sep-19		6.9	8	
12-Sep-19	10-Oct-19		7.2	8	
17-Sep-19	10-Oct-19		7.0	9	
24-Sep-19	10-Oct-19		6.6	12	
1-Oct-19	14-Nov-19		6.6	9	
8-Oct-19	14-Nov-19		6.9	7	
15-Oct-19	14-Nov-19		7.0	10	
22-Oct-19	14-Nov-19		6.8	9	
31-Oct-19	14-Nov-19		7.2	9	
5-Nov-19	14-Nov-19		7.6	6	
12-Nov-19	12-Dec-19		7.5	8	
19-Nov-19	12-Dec-19		6.8	10	
7-Jul-20	13-Aug-20		6.9	13	
16-Jul-20	13-Aug-20		7.4	7	
20-Jul-20	13-Aug-20		6.8	12	
23-Jul-20	13-Aug-20		6.9	10	
5-Aug-20	10-Sep-20		6.5	11	
7-Aug-20	10-Sep-20		6.7	9	
11-Aug-20	10-Sep-20		6.8	11	
25-Aug-20	10-Sep-20		6.6	11	
27-Aug-20	10-Sep-20		7.0	10	
1-Sep-20	10-Sep-20		6.7	10	
8-Sep-20	13-Oct-20		7.1	13	
10-Sep-20	13-Oct-20		7.0	11	
16-Sep-20	13-Oct-20		7.1	11	
23-Sep-20	13-Oct-20		7.2	9	
28-Sep-20	13-Oct-20		7.4	13	
6-Oct-20	13-Nov-20		7.3	6	
13-Oct-20	13-Nov-20		7.2	10	
22-Oct-20	13-Nov-20		7.2	10	
27-Oct-20	13-Nov-20		7.2	11	
3-Nov-20	13-Nov-20		7.2	11	

**Sampling Point: Monitoring Point 2 - Mill Process and Cooling Water Discharge**

Licencee Manildra Harwood Sugars  
 Location 117 Pacific Highway, Broadwater  
 EPL No 172  
 Parameters Monitored pH and Temperature (°C)  
 Frequency & Method Fortnightly Representative Sample.  
 Limit/s See table



Comments Percentile limits: A 90 percentile limit means 90% of results must be below this prescribed value. Maximum limit is the maximum permissible discharge value

Date Sampled	Date Published	Licence Limits	pH	Temperature (°C)	Notes
		90 <sup>th</sup> Percentile		45	
		Maximum	6.5 - 8.5	50	
10-Nov-20	10-Dec-20		7.2	10	
17-Nov-20	10-Dec-20		7.2	10	
10-Jun-21	09-Jul-21		7.3	10	
15-Jun-21	09-Jul-21		7.4	12	
22-Jun-21	09-Jul-21		7.5	9	
29-Jun-21	09-Jul-21		7.3	13	
13-Jul-21	13-Aug-21		7.4	10	
15-Jul-21	13-Aug-21		7.4	7	
20-Jul-21	13-Aug-21		7.5	7	
27-Jun-21	13-Aug-21		7.5	10	
10-Aug-21	10-Sep-21		7.3	11	
12-Aug-21	10-Sep-21		7.3	10	
17-Aug-21	10-Sep-21		7.5	10	
24-Aug-21	10-Sep-21		7.3	11	
2-Sep-21	10-Sep-21		7.4	8	
7-Sep-21	13-Oct-21		7.3	13	
14-Sep-21	13-Oct-21		7.4	10	
21-Sep-21	13-Oct-21		7.3	8	
28-Sep-21	13-Oct-21		7.5	7	
5-Oct-21	13-Oct-21		7.3	14	
12-Oct-21	12-Nov-21		8.2	11	
19-Oct-21	12-Nov-21		7.8	6	
26-Oct-21	12-Nov-21		7.7	11	
2-Nov-21	12-Nov-21		7.5	10	

**Sampling Point: Monitoring Point 2 - Mill Process and Cooling Water Discharge**

Licencee Manildra Harwood Sugars  
 Location 117 Pacific Highway, Broadwater  
 EPL No 172  
 Parameters Monitored **Volume**  
 Frequency & Method Continuous Approved Method  
 Limit/s 85000 k/L/day



The results in the table provide a fortnightly summary of the minimum, maximum and mean daily volume discharged in kilolitres per day for the period

Comments

MONITORING PERIOD			Volume k/L/day			Notes
Date Start	Date Finish	Date Published	Minimum Daily Discharge	Maximum Daily Discharge	Mean Daily Discharge	
12-Nov-17	18-Nov-17	15-Dec-18	0.0	44271.0	18431.4	Mill not crushing 10/11/17 - 14/11/17
19-Nov-17	25-Nov-17	15-Dec-18	41081.8	46324.9	43134.5	
26-Nov-17	2-Dec-17	15-Dec-18	37260.7	45463.8	40951.8	
3-Dec-17	9-Dec-17	15-Dec-18	0.0	40246.1	19682.9	Finished crushing Tuesday 5/12/17
3-Jun-18	9-Jun-18	13-Jul-18	0.0	35910.5	26247.8	Started crushing 4/6/18
10-Jun-18	16-Jun-18	13-Jul-18	0.0	42936.9	39981.5	
17-Jun-18	23-Jun-18	13-Jul-18	33081.6	44800.9	41368.3	
24-Jun-18	30-Jun-18	22-Aug-18	25827.0	42714.0	35823.0	
1-Jul-18	7-Jul-18	22-Aug-18	23448.0	41683.0	30714.0	
8-Jul-18	14-Jul-18	22-Aug-18	0.0	43751.0	35607.0	
15-Jul-18	21-Jul-18	22-Aug-18	39279.1	49065.5	42527.7	
22-Jul-18	28-Jul-18	22-Aug-18	29769.4	43904.2	39709.0	
29-Jul-18	4-Aug-18	22-Aug-18	0.0	44939.4	33983.3	
5-Aug-18	11-Aug-18	22-Aug-18	25849.9	45430.8	38291.7	
12-Aug-18	18-Aug-18	22-Aug-18	39722.7	47990.4	43774.1	
19-Aug-18	25-Aug-18	26-Oct-18	27608.9	48156.2	40717.9	
26-Aug-18	1-Sep-18	26-Oct-18	42546.7	50115.7	45755.4	
2-Sep-18	8-Sep-18	26-Oct-18	0.0	45977.2	2790.3	
9-Sep-18	15-Sep-18	26-Oct-18	0.0	43124.2	45083.6	
16-Sep-18	22-Sep-18	26-Oct-18	44735.5	50517.5	46994.9	
23-Sep-18	29-Sep-18	26-Oct-18	31765.7	48139.6	43574.5	
30-Sep-18	6-Oct-18	26-Oct-18	43791.2	52608.3	48704.2	
7-Oct-18	13-Oct-18	26-Oct-18	34372.6	45398.2	42652.0	
14-Oct-18	20-Oct-18	26-Oct-18	0.0	37550.8	3040.7	
21-Oct-18	27-Oct-18	14-Dec-18	0.0	52492.2	48986.8	
28-Oct-18	3-Nov-18	14-Dec-18	43523.2	50691.4	47141.5	
4-Nov-18	10-Nov-18	14-Dec-18	38275.6	52983.6	48497.8	
11-Nov-18	17-Nov-18	14-Dec-18	38583.0	54132.3	47992.9	
18-Nov-18	24-Nov-18	14-Dec-18	48096.4	53434.0	50392.5	
25-Nov-18	1-Dec-18	14-Dec-18	0.0	49697.7	28889.0	
14-Jul-19	20-Jul-19	8-Aug-19	0.0	48185.4	36198.5	Commenced crushing 15/7/19
21-Jul-19	27-Jul-19	8-Aug-19	35640.8	49683.5	44823.9	
28-Jul-19	3-Aug-19	8-Aug-19	0.0	53164.7	41994.0	
4-Aug-19	10-Aug-19	12-Sep-19	37818.5	46063.2	42112.9	
11-Aug-19	17-Aug-19	12-Sep-19	35120.4	43425.7	38334.5	
18-Aug-19	24-Aug-19	12-Sep-19	33126.9	48597.9	41952.8	
25-Aug-19	31-Aug-19	12-Sep-19	0.0	51643.3	48138.0	
1-Sep-19	7-Sep-19	12-Sep-19	0.0	47910.3	36912.1	
8-Sep-19	14-Sep-19	10-Oct-19	46352.4	51294.2	49632.2	
15-Sep-19	21-Sep-19	10-Oct-19	0.0	48193.6	35005.4	
22-Sep-19	28-Sep-19	10-Oct-19	30957.8	51702.5	42243.4	
29-Sep-19	5-Oct-19	10-Oct-19	42288.0	54670.5	50384.9	
6-Oct-19	12-Oct-19	14-Nov-19	33905.0	54473.0	47316.1	
13-Oct-19	19-Oct-19	14-Nov-19	42070.5	54066.6	49190.0	
20-Oct-19	26-Oct-19	14-Nov-19	28135.3	69033.8	49975.1	
27-Oct-19	2-Nov-19	14-Nov-19	0.0	72881.4	56102.5	
3-Nov-19	9-Nov-19	14-Nov-19	0.0	66578.6	50039.6	
10-Nov-19	16-Nov-19	12-Dec-19	39073.9	48803.2	45070.0	
17-Nov-19	23-Nov-19	12-Dec-19	39073.9	48803.0	45070.0	Crush End Date 22/11/19
21-Jun-20	27-Jun-20	13-Aug-20	27261.8	40531.4	20602.2	crushing commenced 24/6/20
28-Jul-20	4-Jul-20	13-Aug-20	37941.9	49158.4	42892.6	
5-Jul-20	11-Jul-20	13-Aug-20	21894.6	52185.0	44081.1	
12-Jul-20	18-Jul-20	13-Aug-20	0.0	50664.9	34177.3	
19-Jul-20	25-Jul-20	13-Aug-20	16605.7	50656.3	41413.9	
26-Jul-20	1-Aug-20	13-Aug-20	0.0	47457.6	23352.0	
2-Aug-20	8-Aug-20	13-Aug-20	37375.3	53150.6	45427.5	
9-Aug-20	15-Aug-20	10-Sep-20	34234.6	53122.0	45901.5	
16-Aug-20	22-Aug-20	10-Sep-20	0.0	53287.6	20905.0	
23-Aug-20	29-Aug-20	13-Oct-20	42202.7	51894.1	48083.3	
30-Aug-20	5-Sep-20	13-Oct-20	33880.7	49386.0	46132.2	
6-Sep-20	12-Sep-20	13-Oct-20	45426.2	50376.5	48662.0	
13-Sep-20	19-Sep-20	13-Oct-20	27579.2	49552.8	42602.0	
20-Sep-20	26-Sep-20	13-Oct-20	47922.9	57622.1	52704.2	
27-Sep-20	3-Oct-20	13-Oct-20	43754.9	54881.3	48963.2	
4-Oct-20	10-Oct-20	13-Oct-20	51065.5	54863.7	52509.6	
11-Oct-20	17-Oct-20	13-Nov-20	44222.0	63347.7	79472.0	
18-Oct-20	24-Oct-20	13-Nov-20	41115.1	56829.6	52887.1	
25-Oct-20	31-Oct-20	13-Nov-20				Issue with bailey computers, no data for this week
1-Nov-20	7-Nov-20	13-Nov-20	52043.7	54603.2	53073.9	
8-Nov-20	14-Nov-20	10-Dec-20	38628.6	58873.2	50857.8	
15-Nov-20	20-Nov-20	10-Dec-20	19699.1	53096.8	44377.3	Crushing Season Ended 20/11/20

**Sampling Point:** Monitoring Point 2 - Mill Process and Cooling Water Discharge

Licence: Manildra Harwood Sugars  
 Location: 117 Pacific Highway, Broadwater  
 EPL No: 172  
 Parameters Monitored: **Volume**  
 Frequency & Method: Continuous Approved Method  
 Limit/s: 85000 k/L/day



The results in the table provide a fortnightly summary of the minimum, maximum and mean daily volume discharged in kilolitres per day for the period

Comments

MONITORING PERIOD			Volume k/L/day			Notes
Date Start	Date Finish	Date Published	Minimum Daily Discharge	Maximum Daily Discharge	Mean Daily Discharge	
6-Jun-21	12-Jun-21	09-Jul-21	27346.6	46602.1	34792.0	
13-Jun-21	19-Jun-21	09-Jul-21	36626.7	45685.4	42937.1	
20-Jun-21	26-Jun-21	09-Jul-21	34257.3	64372.0	51164.2	
27-Jun-21	3-Jul-21	09-Jul-21	36391.2	70004.0	47863.2	
4-Jul-21	10-Jul-21	13-Aug-21	0.0	52421.0	27121.9	Corrected for Pan 4 calc error
11-Jul-21	17-Jul-21	13-Aug-21	44323.5	57097.7	49246.2	
18-Jul-21	24-Jul-21	13-Aug-21	33076.2	52314.6	46397.2	
25-Jul-21	31-Jul-21	13-Aug-21	39554.6	47844.5	43846.9	
1-Aug-21	7-Aug-21	10-Sep-21	0.0	55648.6	35446.7	
8-Aug-21	14-Aug-21	10-Sep-21	42013.2	45804.5	44136.4	
15-Aug-21	21-Aug-21	10-Sep-21	30782.0	51422.2	41836.9	
22-Aug-21	28-Aug-21	10-Sep-21	40920.6	55245.6	46966.3	
29-Aug-21	4-Sep-21	10-Sep-21	0.0	48511.7	37360.8	
5-Sep-21	11-Sep-21	13-Oct-21	42707.6	49070.5	46127.4	
12-Sep-21	18-Sep-21	13-Oct-21	28857.7	50246.7	44877.1	
19-Sep-21	25-Sep-21	13-Oct-21	41035.8	48681.9	45152.6	
26-Sep-21	2-Oct-21	13-Oct-21	26317.8	45961.2	41817.9	
3-Oct-21	9-Oct-21	13-Oct-21	45311.4	52572.1	48600.8	
10-Oct-21	16-Oct-21	12-Nov-21	0.0	51673.3	44918.0	
17-Oct-21	23-Oct-21	12-Nov-21	0.0	46001.9	40919.9	
24-Oct-21	30-Oct-21	12-Nov-21	40433.6	53670.3	55340.1	



**Sampling Point: Monitoring Point 3 - Injection Water Inlet, Background River Water Quality**

Licencee Manildra Harwood Sugars  
 Location 117 Pacific Highway, Broadwater  
 EPL No 172



Parameters Monitored **Biochemical Oxygen Demand and Total Suspended Solids**  
 Frequency & Method Fortnightly Composite  
 Limit/s Provides background data to determine compliance at monitoring points 4 & 2  
 Comments Lab Analysis Required

Date Sampled	Date Results Obtained	Date Published	BOD <sub>5</sub> (mg/L)	TSS (mg/L)	Notes
05-Sep-17	11-Sep-17	15-Sep-17	1.5	24	
12-Sep-17	18-Sep-17	20-Oct-17	1.8	15	
19-Sep-17	25-Sep-17	20-Oct-17	1.2	23	
26-Sep-17	06-Oct-17	20-Oct-17	1.4	13	
04-Oct-17	16-Oct-17	20-Oct-17	1.2	15	
11-Oct-17	20-Oct-17	24-Nov-17	1.3	9	
01-Nov-17	13-Nov-17	24-Nov-17	2.0	18	Mill not crushing 17/10/17 - 25/10/17
08-Nov-17	17-Nov-01	24-Nov-17	1.7	33	Mill not crushing 9/11/17 - 14/11/17
17-Nov-17	24-Nov-17	24-Nov-17	4.0	62	
22-Nov-17	29-Nov-17	15-Dec-17	2.7	69	
29-Nov-17	06-Dec-17	15-Dec-17	1.2	16	
13-Jun-18	21-Jun-18	13-Jul-18	5.0	29	Crushing commenced 4th June
15-Jun-18	22-Jun-18	13-Jul-18	2.3	42	
21-Jun-18	29-Jun-18	13-Jul-18	1.4	29	
28-Jun-18	09-Jul-18	13-Jul-18	1.6	15	
03-Jul-18	11-Jul-18	22-Aug-18	2.1	14	
10-Jul-18	16-Jul-18	22-Aug-18	2.0	17	
17-Jul-18	25-Jul-18	22-Aug-18	1.6	25	
26-Jul-18	02-Aug-18	22-Aug-18	3.0	10	
31-Jul-18	09-Aug-18	22-Aug-18	1.0	22	
10-Aug-18	23-Aug-18	26-Oct-18	1.5	13	
14-Aug-18	24-Aug-18	26-Oct-18	1.7	19	
24-Aug-18	31-Aug-18	26-Oct-18	2.4	11	
29-Aug-18	06-Sep-18	26-Oct-18	1.2	14	
04-Sep-18	12-Sep-18	26-Oct-18	1.1	14	
14-Sep-18	25-Sep-18	26-Oct-18	1.0	15	
18-Sep-18	25-Sep-18	26-Oct-18	1.3	11	
27-Sep-18	03-Oct-18	26-Oct-18	1.6	37	
02-Oct-18	10-Oct-18	26-Oct-18	1.8	12	
12-Oct-18	30-Oct-18	14-Dec-18	1.4	17	
26-Oct-18	31-Oct-18	14-Dec-18	1.8	42	
30-Oct-18	07-Nov-18	14-Dec-18	1.4	39	
06-Nov-18	13-Nov-18	14-Dec-18	1.3	53	
13-Nov-18	19-Nov-18	14-Dec-18	1.6	28	
23-Nov-18	29-Nov-18	19-Feb-19	2.0	69	
22-Jul-19	29-Jul-19	08-Aug-19	1.6	20	
30-Jul-19	06-Aug-18	08-Aug-19	1.3	11	
06-Aug-19	13-Aug-19	12-Sep-19	1.6	15	
14-Aug-19	22-Aug-19	12-Sep-19	4.0	8	
20-Aug-19	27-Aug-19	12-Sep-19	2.7	11	
27-Aug-19	02-Sep-19	12-Sep-19	1.0	12	
03-Sep-19	09-Sep-19	12-Sep-19	1.7	13	
12-Sep-19	18-Sep-19	10-Oct-19	2.0	15	
17-Sep-19	23-Sep-19	10-Oct-19	1.4	23	
24-Sep-19	30-Sep-19	10-Oct-19	1.0	13	
01-Oct-19	09-Oct-19	14-Nov-19	1.9	42	
08-Oct-19	15-Oct-19	14-Nov-19	1.0	19	
15-Oct-19	22-Oct-19	14-Nov-19	1.0	26	
22-Oct-19	30-Oct-19	14-Nov-19	3.0	18	
31-Oct-19	06-Nov-19	14-Nov-19	1.0	61	
05-Nov-19	12-Nov-19	14-Nov-19	1.4	8	
12-Nov-19	21-Nov-19	12-Dec-19	1.8	20	
19-Nov-19	26-Nov-19	12-Dec-19	1.3	9	
07-Jul-20	14-Jul-20	13-Aug-20	1.2	11	
16-Jul-20	23-Jul-20	13-Aug-20	3.0	12	
20-Jul-20	27-Jul-20	13-Aug-20	0.9	16	
23-Jul-20	30-Jul-20	13-Aug-20	1.0	34	
05-Aug-20	17-Aug-20	10-Sep-20	1.3	61	
07-Aug-20	13-Aug-20	10-Sep-20	2.6	43	
11-Aug-20	17-Aug-20	10-Sep-20	1.7	23	
25-Aug-20	31-Aug-20	10-Sep-20	2.5	21	
27-Aug-20	02-Sep-20	10-Sep-20	2.3	19	
01-Sep-20	10-Sep-20	10-Sep-20	1.3	39	
08-Sep-20	15-Sep-20	13-Oct-20	1.4	26	
10-Sep-20	15-Sep-20	13-Oct-20	2.3	21	
16-Sep-20	22-Jun-20	13-Oct-20	1.4	32	
23-Sep-20	29-Sep-20	13-Oct-20	1.4	20	
28-Sep-20	06-Oct-20	13-Oct-20	1.3	27	
06-Oct-20	14-Oct-20	13-Nov-20	1.2	19	
13-Oct-20	20-Oct-20	13-Nov-20	1.5	10	
22-Oct-20	28-Oct-20	13-Nov-20	1.7	38	
27-Oct-20	10-Nov-20	13-Nov-20	1.4	8	
03-Nov-20	10-Nov-20	13-Nov-20	1.1	48	
10-Nov-20	17-Nov-20	10-Dec-20	1.9	22	
17-Nov-20	25-Nov-20	10-Dec-20	1.1	75	
10-Jun-21	17-Jun-21	09-Jul-21	5.0	16	Commenced crushing 7/6/21

**Sampling Point: Monitoring Point 3 - Injection Water Inlet, Background River Water Quality**

Licencee Manildra Harwood Sugars  
 Location 117 Pacific Highway, Broadwater  
 EPL No 172



Parameters Monitored **Biochemical Oxygen Demand and Total Suspended Solids**

Frequency & Method Fortnightly Composite

Limit/s Provides background data to determine compliance at monitoring points 4 & 2

Comments Lab Analysis Required

Date Sampled	Date Results Obtained	Date Published	BOD <sub>5</sub> (mg/L)	TSS (mg/L)	Notes
15-Jun-21	22-Jun-21	09-Jul-21	1.6	17	
22-Jun-21	29-Jun-21	09-Jul-21	1.6	19	
29-Jun-21	05-Jul-21	09-Jul-21	2.4	27	
13-Jul-21	20-Jul-21	13-Aug-21	1.4	26	
15-Jul-21	22-Jul-21	13-Aug-21	1.8	28	
20-Jul-21	26-Jul-21	13-Aug-21	1.5	24	
27-Jul-21	02-Aug-21	13-Aug-21	1.7	28	
10-Aug-21	16-Aug-21	10-Sep-21	1.9	23	
12-Aug-21	18-Aug-21	10-Sep-21	1.8	28	
17-Aug-21	24-Aug-21	10-Sep-21	2.7	19	
24-Aug-21	31-Aug-21	10-Sep-21	1.5	29	
02-Sep-21	07-Sep-21	10-Sep-21	2.9	7	
07-Sep-21	14-Sep-21	13-Oct-21	1.0	29	
14-Sep-21	21-Sep-21	13-Oct-21	3.6	17	
21-Sep-21	29-Sep-21	13-Oct-21	1.2	43	
28-Sep-21	08-Oct-21	13-Oct-21	1.3	10	
05-Oct-21	11-Oct-21	13-Oct-21	1.0	19	
12-Oct-21	19-Oct-21	12-Nov-21	2.2	17	
19-Oct-21	25-Oct-21	12-Nov-21	1.0	19	
26-Oct-21	03-Nov-21	12-Nov-21	1.4	24	
02-Nov-21	09-Nov-21	12-Nov-21	1.3	27	Final sample for 2021 crush

**Sampling Point:** Monitoring Point 3 - Injection Water Inlet, Background River Water Quality  
**Licencee:** Manildra Harwood Sugars  
**Location:** 117 Pacific Highway, Broadwater  
**EPL No:** 172  
**Parameters Monitored:** pH & Temperature  
**Frequency & Method:** Fortnightly Representative Insitu  
**Limit/s:** Provides background data to determine compliance at monitoring points 4 & 2  
**Comments:**



Date Sampled & Obtained	Date Published	pH	Temp (°C)	Notes
05-Sep-17	15-Sep-17	7.7	20.2	
12-Sep-17	20-Oct-17	7.6	21.3	
19-Sep-17	20-Oct-17	7.6	21.0	
26-Sep-17	20-Oct-17	7.8	23.8	
03-Oct-17	20-Oct-17	7.7	22.1	
11-Oct-17	24-Nov-17	7.6	25.4	
01-Nov-17	24-Nov-17	7.2	24.2	Mill not crushing 17/10/17 - 25/10/17
08-Nov-17	24-Nov-17	7.1	22.3	
17-Nov-17	24-Nov-17	6.7	22.5	
22-Nov-17	15-Dec-17	7.8	24.5	
29-Nov-17	15-Dec-17	7.7	27.3	
13-Jun-18	13-Jul-18	7.3	18.6	
15-Jun-18	13-Jul-18	7.3	18.8	
21-Jun-18	13-Jul-18	7.6	17.6	
28-Jun-18	13-Jul-18	7.6	18.1	
03-Jul-18	13-Jul-18	7.6	18.5	
10-Jul-18	22-Aug-18	7.5	18.3	
17-Jul-18	22-Aug-18	7.4	17.8	
26-Jul-18	22-Aug-18	7.4	18.1	
31-Jul-18	22-Aug-18	7.5	18.1	
10-Aug-18	26-Oct-18	7.5	18.4	
14-Aug-18	26-Oct-18	7.5	18.3	
24-Aug-18	26-Oct-18	7.6	20.5	
29-Aug-18	26-Oct-18	7.4	21.0	
04-Sep-18	26-Oct-18	7.5	19.3	
14-Sep-18	26-Oct-18	7.4	21.5	
18-Sep-18	26-Oct-18	7.7	22.3	
27-Sep-18	26-Oct-18	7.4	20.5	
02-Oct-18	26-Oct-18	7.6	21.5	
12-Oct-18	14-Dec-18	7.7	21.0	
26-Oct-18	14-Dec-18	7.1	23.1	
30-Oct-18	14-Dec-18	7.2	21.1	
06-Nov-18	14-Dec-18	7.1	24.8	
13-Nov-18	14-Dec-18	7.4	25.5	
23-Nov-15	19-Feb-19	7.2	25.6	
22-Jul-19	08-Aug-19	6.3	18.7	
30-Jul-19	08-Aug-19	7.0	19.3	
06-Aug-19	12-Sep-19	7.5	19.7	
14-Aug-19	12-Sep-19	7.0	17.9	
20-Aug-19	12-Sep-19	7.1	18.5	
27-Aug-19	12-Sep-19	7.3	19.7	
03-Sep-19	12-Sep-19	7.0	20.4	
12-Sep-19	10-Oct-19	7.3	20.1	
17-Sep-19	10-Oct-19	7.1	21.2	
24-Sep-19	10-Oct-19	6.5	22.4	
01-Oct-19	14-Nov-19	6.7	22.5	
08-Oct-19	14-Nov-19	7.0	23.8	
15-Oct-19	14-Nov-19	7.2	20.6	
22-Oct-19	14-Nov-19	7.0	23.4	
31-Oct-19	14-Nov-19	7.4	23.7	
05-Nov-19	14-Nov-19	7.2	25.4	
12-Nov-19	12-Dec-19	7.6	23.7	
19-Nov-19	12-Dec-19	6.9	25.4	Samples sent away 2 days after sampling due to laboratory being closed
07-Jul-20	13-Aug-20	7.1	17.7	Commenced crushing 24th June
16-Jul-20	13-Aug-20	7.2	18.3	
20-Jul-20	13-Aug-20	7.0	18.6	
23-Jul-20	13-Aug-20	7.0	17.8	
05-Aug-20	10-Sep-20	6.6	18.4	
07-Aug-20	10-Sep-20	6.7	17.5	
11-Aug-20	10-Sep-20	6.9	18.6	
25-Aug-20	10-Sep-20	6.8	18.1	
27-Aug-20	10-Sep-20	7.2	18.8	
01-Sep-20	10-Sep-20	7.0	20.0	
08-Sep-20	13-Oct-20	7.4	21.4	
10-Sep-20	13-Oct-20	7.4	21.0	
16-Sep-20	13-Oct-20	7.4	21.3	
23-Sep-20	13-Oct-20	7.3	22.5	
28-Sep-20	13-Oct-20	7.5	22.2	
06-Oct-20	13-Oct-20	7.5	23.1	
13-Oct-20	13-Nov-20	7.4	23.6	
22-Oct-20	13-Nov-20	7.1	24.7	
27-Oct-20	13-Nov-20	7.4	24.7	
03-Nov-20	13-Nov-20	7.4	24.0	
10-Nov-20	10-Dec-20	7.5	24.2	
17-Nov-20	10-Dec-20	7.4	27.3	
10-Jun-21	09-Jul-21	7.6	18.2	

**Sampling Point:** Monitoring Point 3 - Injection Water Inlet, Background River Water Quality  
 Licence: Manildra Harwood Sugars  
 Location: 117 Pacific Highway, Broadwater  
 EPL No: 172  
 Parameters Monitored: pH & Temperature  
 Frequency & Method: Fortnightly Representative In situ  
 Limit/s: Provides background data to determine compliance at monitoring points 4 & 2  
 Comments:



Date Sampled & Obtained	Date Published	pH	Temp (°C)	Notes
15-Jun-21	09-Jul-21	7.5	17.5	
22-Jun-21	09-Jul-21	7.8	18.0	
29-Jun-21	09-Jul-21	7.6	17.4	
13-Jul-21	13-Aug-21	7.6	17.9	
15-Jul-21	13-Aug-21	7.6	17.8	
20-Jul-21	13-Aug-21	7.8	17.2	
27-Jul-21	13-Aug-21	7.9	17.1	
10-Aug-21	10-Sep-21	7.6	18.0	
12-Aug-21	10-Sep-21	7.6	18.5	
17-Aug-21	10-Sep-21	7.6	18.9	
24-Aug-21	10-Sep-21	7.5	19.6	
02-Sep-21	10-Sep-21	7.6	20.0	
07-Sep-21	13-Oct-21	7.6	19.0	
14-Sep-21	13-Oct-21	7.6	20.6	
21-Sep-21	13-Oct-21	7.5	20.8	
28-Sep-21	13-Oct-21	7.6	20.3	
05-Oct-21	13-Oct-21	7.5	21.7	
12-Oct-21	12-Nov-21	7.7	22.3	
19-Oct-21	12-Nov-21	7.7	21.0	
26-Oct-21	12-Nov-21	7.8	23.1	
02-Nov-21	12-Nov-21	7.6	21.7	

<b>Sampling Point:</b>	<b>Monitoring Point 4 - Mill Torri Drain Discharge</b>
Licencee	Manildra Harwood Sugars
Location	117 Pacific Highway, Broadwater
EPL No	172
Parameters Monitored	Biochemical Oxygen Demand and Total Suspended Solids
Frequency & Method	Fortnightly Composite
Limit/s	Not Applicable. Used to provide values to determine compliance at monitoring point 2
Comments	Lab Analysis Required



Date Sampled	Date Results Obtained	Date Published	BOD <sub>5</sub> (mg/L)	TSS (mg/L)	Notes
05-Sep-17	11-Sep-17	15-Sep-17	35	10	
12-Sep-17	17-Sep-17	20-Oct-17	28	10	
19-Sep-17	25-Sep-17	20-Oct-17	24	21	
26-Sep-17	06-Oct-17	20-Oct-17	28	9	
04-Oct-17	16-Oct-17	20-Oct-17	19	10	
11-Oct-17	20-Oct-17	24-Nov-17	33	9	Mill not crushing 17/10/17 - 25/10/17
01-Nov-17	13-Nov-17	24-Nov-17	27	31	
08-Nov-17	17-Nov-17	24-Nov-17	50	29	Mill not crushing 9/11/17 - 14/11/17
17-Nov-17	24-Nov-17	24-Nov-17	22	50	
22-Nov-17	29-Nov-17	15-Dec-17	37	63	
29-Nov-17	06-Dec-17	15-Dec-17	24	10	
					Finished crushing 5/12/17
13-Jun-18	21-Jun-18	13-Jul-18	20	31	
15-Jun-18	22-Jun-18	13-Jul-18	33	24	
21-Jun-18	29-Jun-18	13-Jul-18	36	20	
28-Jun-18	09-Jul-18	13-Jul-18	38	10	
03-Jul-18	11-Jul-18	22-Aug-18	31	13	
10-Jul-18	16-Jul-18	22-Aug-18	34	18	
17-Jul-18	25-Jul-18	22-Aug-18	28	16	
26-Jul-18	02-Aug-18	22-Aug-18	40	23	
31-Jul-18	09-Aug-18	22-Aug-18	28	25	
10-Aug-18	23-Aug-18	26-Oct-18	62	5	Greater than 30 C-Cr cane processed
14-Aug-18	23-Aug-18	26-Oct-18	57	13	Greater than 7 day cane burnt processed
24-Aug-18	31-Aug-18	26-Oct-18	39	9	
29-Aug-18	06-Sep-18	26-Oct-18	27	10	
04-Sep-18	12-Sep-18	26-Oct-18	29	10	
14-Sep-18	25-Sep-18	26-Oct-18	40	14	
18-Sep-18	25-Sep-18	26-Oct-18	33	10	
27-Sep-18	03-Oct-18	26-Oct-18	43	27	
02-Oct-18	10-Oct-18	26-Oct-18	36	4	
12-Oct-18	30-Oct-18	14-Dec-18	44	10	
26-Oct-18	31-Oct-18	14-Dec-18	36	45	
30-Oct-18	07-Nov-18	14-Dec-18	36	35	
06-Nov-18	13-Nov-18	14-Dec-18	34	50	
13-Nov-18	19-Nov-18	14-Dec-18	35	17	
23-Nov-18	29-Nov-18	19-Feb-19	25	32	
22-Jul-19	29-Jul-19	08-Aug-19	27	13	
30-Jul-19	06-Aug-19	08-Aug-19	26	7	
06-Aug-19	13-Aug-19	12-Sep-19	12	14	
14-Aug-19	22-Aug-19	12-Sep-19	25	5	
20-Aug-19	27-Aug-19	12-Sep-19	31	8	
27-Aug-19	02-Sep-19	12-Sep-19	71	10	Stale cane
03-Sep-19	09-Sep-19	12-Sep-19	31	25	
12-Sep-19	18-Sep-19	10-Oct-19	38	11	
17-Sep-19	23-Sep-19	10-Oct-19	39	18	
24-Sep-19	30-Sep-19	10-Oct-19	36	8	
01-Oct-19	09-Oct-19	14-Nov-19	32	27	
08-Oct-19	15-Oct-19	14-Nov-19	27	17	
15-Oct-19	22-Oct-19	14-Nov-19	16	35	
22-Oct-19	30-Oct-19	14-Nov-19	39	15	
31-Oct-19	06-Nov-19	14-Nov-19	28	41	
05-Nov-19	12-Nov-19	14-Nov-19	23	3	
12-Nov-19	21-Nov-19	12-Dec-19	14	13	
19-Nov-19	26-Nov-19	12-Dec-19	18	8	
07-Jul-20	14-Jul-20	13-Aug-20	18	13	
16-Jul-20	23-Jul-20	13-Aug-20	46	10	
20-Jul-20	27-Jul-20	13-Aug-20	21	15	
23-Jul-20	30-Jul-20	13-Aug-20	19	20	
05-Aug-20	17-Aug-20	10-Sep-20	28	52	
07-Aug-20	13-Aug-20	10-Sep-20	24	43	
11-Aug-20	17-Aug-20	10-Sep-20	21	24	
25-Aug-20	31-Aug-20	10-Sep-20	36	12	
27-Aug-20	02-Sep-20	10-Sep-20	43	21	
01-Sep-20	10-Sep-20	10-Sep-20	39	10	
08-Sep-20	15-Sep-20	13-Oct-20	34	17	
10-Sep-20	15-Sep-20	13-Oct-20	35	14	
16-Sep-20	22-Sep-20	13-Oct-20	26	21	
23-Sep-20	29-Sep-20	13-Oct-20	22	10	
28-Sep-20	06-Oct-20	13-Oct-20	20	18	
06-Oct-20	14-Oct-20	13-Nov-20	29	10	

<b>Sampling Point:</b>	<b>Monitoring Point 4 - Mill Torri Drain Discharge</b>
Licencee	Manildra Harwood Sugars
Location	117 Pacific Highway, Broadwater
EPL No	172
Parameters Monitored	Biochemical Oxygen Demand and Total Suspended Solids
Frequency & Method	Fortnightly Composite
Limit/s	Not Applicable. Used to provide values to determine compliance at monitoring point 2
Comments	Lab Analysis Required



Date Sampled	Date Results Obtained	Date Published	BOD <sub>5</sub> (mg/L)	TSS (mg/L)	Notes
13-Oct-20	20-Oct-20	13-Nov-20	31	10	
22-Oct-20	28-Oct-20	13-Nov-20	24	16	
27-Oct-20	10-Nov-20	13-Nov-20	25	15	
03-Nov-20	10-Nov-20	13-Nov-20	19	15	
10-Nov-20	17-Oct-20	10-Dec-20	20	2	
17-Nov-20	24-Nov-20	10-Dec-20	11	53	
10-Jun-21	17-Jun-21	09-Jul-21	15	9	Commenced crushing 7/6/21
15-Jun-21	22-Jun-21	09-Jul-21	24	19	
22-Jun-21	29-Jun-21	09-Jul-21	19	17	
29-Jun-21	05-Jul-21	09-Jul-21	23	22	
13-Jul-21	20-Jul-21	13-Aug-21	16	21	
15-Jul-21	22-Jul-21	13-Aug-21	36	27	
20-Jul-21	26-Jul-21	13-Aug-21	15	20	
27-Jul-21	02-Aug-21	13-Aug-21	21	24	
10-Aug-21	16-Aug-21	10-Sep-21	20	20	
12-Aug-21	18-Aug-21	10-Sep-21	36	22	
17-Aug-21	24-Aug-21	10-Sep-21	27	19	
24-Aug-21	31-Aug-21	10-Sep-21	26	33	
02-Sep-21	07-Sep-21	10-Sep-21	45	6	
07-Sep-21	14-Sep-21	13-Oct-21	29	16	
14-Sep-21	21-Sep-21	13-Oct-21	37	12	
21-Sep-21	28-Sep-21	13-Oct-21	24	43	
28-Sep-21	08-Oct-21	13-Oct-21	39	12	
05-Oct-21	11-Oct-21	13-Oct-21	34	14	
12-Oct-21	19-Oct-21	12-Nov-21	30	6	
19-Oct-21	25-Oct-21	12-Nov-21	37	21	
26-Oct-21	03-Nov-21	12-Nov-21	34	20	
02-Nov-21	09-Nov-21	12-Nov-21	34	20	Final sample for 2021 crush

**Sampling Point:** Monitoring Point 4 - Mill Torri Drain Discharge  
 Licence: Manildra Harwood Sugars  
 Location: 117 Pacific Highway, Broadwater  
 EPL No: 172  
 Parameters Monitored: pH & Temperature  
 Frequency & Method: Fortnightly Representative Insitu  
 Limit/s: Not Applicable. Used to obtain values to determine compliance at monitoring point 2  
 Comments:



Date Sampled & Obtained	Date Published	pH	Temp (°C)	Notes
05-Sep-17	15-Sep-17	7.3	35.9	
12-Sep-17	20-Oct-17	7.6	37.5	
19-Sep-17	20-Oct-17	7.5	34.6	
26-Sep-17	20-Oct-17	7.7	22.1	
03-Oct-17	20-Oct-17	7.6	39.7	
11-Oct-17	24-Nov-17	7.3	37.7	
01-Nov-17	24-Nov-17	7.0	37.5	Mill not crushing 17/10/17 - 25/10/17
08-Nov-17	24-Nov-17	6.8	24.0	
17-Nov-17	24-Nov-17	6.7	33.2	
22-Nov-17	15-Dec-17	7.5	41.3	
29-Nov-17	15-Dec-17	7.7	40.8	
				Finished crushing 5/12/17
13-Jun-18	13-Jul-18	6.9	32.4	
15-Jun-18	13-Jul-18	7.0	30.5	
21-Jun-18	13-Jul-18	7.1	32.5	
28-Jun-18	13-Jul-18	7.2	27.2	
03-Jul-18	13-Jul-18	7.3	31.9	
10-Jul-18	22-Aug-18	7.3	35.2	
17-Jul-18	22-Aug-18	7.4	35.2	
26-Jul-18	22-Aug-18	7.1	34.5	
31-Jul-18	22-Aug-18	7.4	28.9	
10-Aug-18	26-Oct-18	7.2	30.7	
14-Aug-18	26-Oct-18	7.4	29.2	
24-Aug-18	26-Oct-18	7.3	31.6	
29-Aug-18	26-Oct-18	7.3	29.5	
04-Sep-18	26-Oct-18	7.1	35.5	
14-Sep-18	26-Oct-18	7.3	39.1	
18-Sep-18	26-Oct-18	7.2	36.0	
27-Sep-18	26-Oct-18	7.2	36.4	
02-Oct-18	26-Oct-18	7.2	32.6	
12-Oct-18	14-Dec-18	7.4	34.3	
26-Oct-18	14-Dec-18	7.0	29.6	
30-Oct-18	14-Dec-18	7.0	28.0	
06-Nov-18	14-Dec-18	6.8	35.2	
13-Nov-18	14-Dec-18	7.2	34.1	
23-Nov-18	19-Feb-19	7.1	34.1	
22-Jul-19	08-Aug-19	6.5	27.5	
30-Jul-19	08-Aug-19	6.8	25.0	
06-Aug-19	12-Sep-19	7.4	24.7	
14-Aug-19	12-Sep-19	6.7	31.3	
20-Aug-19	12-Sep-19	6.9	29.5	
27-Aug-19	12-Sep-19	7.1	34.9	
03-Sep-19	12-Sep-19	6.9	28.6	
12-Sep-19	10-Oct-19	7.2	27.9	
17-Sep-19	10-Oct-19	7.0	30.5	
24-Sep-19	10-Oct-19	6.6	34.6	
01-Oct-19	14-Nov-19	6.6	31.8	
08-Oct-19	14-Nov-19	6.9	30.5	
15-Oct-19	14-Nov-19	7.0	30.7	
22-Oct-19	14-Nov-19	6.8	31.9	
31-Oct-19	14-Nov-19	7.2	32.6	
05-Nov-19	14-Nov-19	7.6	31.5	
12-Nov-19	12-Dec-19	7.5	31.4	
19-Nov-19	12-Dec-19	6.8	35.0	
07-Jul-20	13-Aug-20	6.9	31.0	
16-Jul-20	13-Aug-20	7.4	25.2	
20-Jul-20	13-Aug-20	6.8	30.4	
23-Jul-20	13-Aug-20	6.9	28.1	
05-Aug-20	10-Sep-20	6.5	29.1	
07-Aug-20	10-Sep-20	6.7	26.3	
11-Aug-20	10-Sep-20	6.8	30.0	
25-Aug-20	10-Sep-20	6.6	29.4	
27-Aug-20	10-Sep-20	7.0	29.0	
01-Sep-20	10-Sep-20	6.7	30.3	
08-Sep-20	13-Oct-20	7.1	34.8	
10-Sep-20	13-Oct-20	7.0	32.3	
16-Sep-20	13-Oct-20	7.1	32.4	
23-Sep-20	13-Oct-20	7.2	31.6	
28-Sep-20	13-Oct-20	7.4	34.9	
06-Oct-20	13-Oct-20	7.3	28.7	

**Sampling Point:** Monitoring Point 4 - Mill Torri Drain Discharge  
 Licencee: Manildra Harwood Sugars  
 Location: 117 Pacific Highway, Broadwater  
 EPL No: 172  
 Parameters Monitored: pH & Temperature  
 Frequency & Method: Fortnightly Representative Insitu  
 Limit/s: Not Applicable. Used to obtain values to determine compliance at monitoring point 2  
 Comments:



Date Sampled & Obtained	Date Published	pH	Temp (°C)	Notes
13-Oct-20	13-Nov-20	7.2	33.7	
22-Oct-20	13-Nov-20	7.2	34.8	
27-Oct-20	13-Nov-20	7.2	35.7	
03-Nov-20	13-Nov-20	7.2	35.2	
10-Nov-20	10-Dec-20	7.2	33.7	
17-Nov-20	10-Dec-20	7.2	37.4	Crushing Season Ended 20/11/20
10-Jun-21	09-Jul-21	7.3	27.8	
15-Jun-21	09-Jul-21	7.4	29.2	
22-Jun-21	09-Jul-21	7.5	27.2	
29-Jun-21	09-Jul-21	7.3	30.0	
13-Jul-21	13-Aug-21	7.4	27.8	
15-Jul-21	13-Aug-21	7.4	24.9	
20-Jul-21	13-Aug-21	7.5	23.9	
27-Jun-21	13-Aug-21	7.5	27.3	
10-Aug-21	10-Sep-21	7.3	28.6	
12-Aug-21	10-Sep-21	7.3	28.7	
17-Aug-21	10-Sep-21	7.5	29.3	
24-Aug-21	10-Sep-21	7.3	31.0	
02-Sep-21	10-Sep-21	7.4	28.3	
07-Sep-21	13-Oct-21	7.3	31.7	
14-Sep-21	13-Oct-21	7.4	30.9	
21-Sep-21	13-Oct-21	7.3	28.3	
28-Sep-21	13-Oct-21	7.5	26.8	
05-Oct-21	13-Oct-21	7.3	35.6	
12-Oct-21	12-Nov-21	8.2	33.3	
19-Oct-21	12-Nov-21	7.8	26.6	
26-Oct-21	12-Nov-21	7.7	34.0	
02-Nov-21	12-Nov-21	7.5	32.0	



