

5 Boat Harbour STP

5.1 Activity and report details

Activity name	Boat Harbour STP		
Activity address	Port Rd, Boat Harbour		
Permit number	Permit Conditions Environmental - 6244	Date of issue	2/08/2002
	EPN	NA	Date of issue NA
Treatment level	Secondary Treatment		
Authorised Dry Weather Flows	170kL/day		
Key Influent Source	Residential		
Contact person	Kate Westgate		
Report author	George Fitzgibbon		
Contact details	Environment@taswater.com.au		
Date of submission	30 September 2023		

Figure 5-1: Boat Harbour Sewage Treatment plant



5.2 Monitoring and compliance summary

5.2.1 Flow data

Table 5-A: Flow monitoring summary

	Influent	Effluent	Reuse
Location Name	Inlet	Bass Strait	No reuse scheme
Coordinates	E 383599 N 5468374	E 383554 N 5468759	NA
Method of Measurement	Inline meter	Estimate based on influent	NA
Date of last Calibration/Validation (if applicable).	5/06/2023	NA	NA

Table 5-B: Annual flow and rainfall data

Month	Average Daily Influent Volume (kL/day)	Rainfall (mm/month) BOM Station ID 91364	Discharge to Waters Total Effluent Volume (ML)	Discharge to Reuse Total Effluent Volume (ML)
July 2022	24	53.1	0.75	--
August 2022	35	177.9	1.07	--
September 2022	26	91.5	0.79	--
October 2022	48	158.0	1.48	--
November 2022	35	94.8	1.04	--
December 2022	27	22.6	0.85	--
January 2023	35	27.4	1.10	--
February 2023	27	37.0	0.76	--
March 2023	27	70.6	0.83	--
April 2023	27	47.6	0.81	--
May 2023	24	85.6	0.75	--
June 2023	26	194.1	0.79	--
Annual 2022-23	30	1060.2	11.02	--
% of Total Discharge	--	--	100.0%	--

2022-23 monthly flow data was submitted directly to the EPA.

5.2.2 Bypass events

There were no bypass events associated with the STP during the reporting period.

5.3 Discharge compliance with permit limits

Table 5-C: Compliance Summary

Parameter	Ammonia	BOD5	Chlorine	Nitrogen	Oil and grease	pH	Phosphorous	E coli	Total suspended solids
Permit/EPN limit	mg/L	mg/L	mg/L	mg/L	mg/L	Units	mg/L	MPN/100ml	mg/L
Maximum	5	20	--	15	10	8.5	8	200	30
90th percentile	3	15	--	10	5	--	5	--	20
50th Percentile	2	10	--	7	2	--	3	--	15
Minimum	--	--	--	--	--	6.5	--	--	--
Samples analysed									
Number required	12	12	--	12	12	12	12	12	12
Number analysed	12	12	--	12	12	13	12	12	12
Statistical summary									
Max	7.6	18	--	32.3	3.3	7.0	12.6	31	17.3
90th percentile	1.9	18	--	31.3	2.0	6.9	11.5	20	9.4
50th percentile	0.6	5	--	20.3	1.0	6.6	7.2	10	4.0
Min	0.1	5	--	10.0	1.0	6.4	4.6	10	4.0
EPN Limit Compliance									
% compliance with Maximum	92%	100%	--	42%	100%	--	58%	100%	100%
% compliance with 90th percentile	92%	83%	--	8%	100%	--	17%	--	100%
% compliance with 50th percentile	92%	75%	--	0%	83%	--	0%	--	92%
% compliance with pH range	--	--	--	--	--	85%	--	--	--

Table 5-D: Mass loads to the environment

Parameter	EPN Limit	Frequency	2022-23 result
Nitrogen (kg)	--	Annual	222.4
Phosphorous (kg)	--	Annual	83.8
Method	Time weighted/Grab sample method		

Table 5-E: Performance Analysis (Discharge to environment)

Effluent compliance parameter	Date(s) of non-compliance	Reasons for non-compliance	Actions to improve performance	
BOD	12-month 90 th percentile limit exceeded	There is limit control of the attached growth process, this leads to high BOD within the effluent.	Investigation into feasibility of modifying the process to increase control.	
Ammonia	16/03/2023	The plant has limited aeration control which results in poor ammonia and nitrogen treatment.	TasWater are investigating implementation of a standalone DO controller.	
Nitrogen	26/07/2022 19/01/2023 02/02/2023 16/03/2023			19/04/2023 25/05/2023 8/06/2023
	12-month 90 th percentile limit exceeded			
	12-month 50 th percentile limit exceeded			
Phosphorus	26/07/2022 19/01/2023 02/02/2023 16/03/2023	The plant does not have any chemical phosphorus removal.	No specific actions implemented.	

Effluent compliance parameter	Date(s) of non-compliance	Reasons for non-compliance	Actions to improve performance
	12-month 90 th percentile limit exceeded		
	12-month 50 th percentile limit exceeded		
pH	19/01/2023 19/04/2023	The plant has limited aeration control results in depletion of alkalinity and therefore pH.	TasWater are investigating implementation of a standalone DO controller.

No other parameters had exceedances in the reporting period.

5.4 Reuse Annual Reporting

No Recycled Water Scheme associated with this STP.

5.5 Ambient monitoring program

Table 5-F: Program details

Program	Boat Harbour Ambient Monitoring Plan
Status	Ambient water quality and biological monitoring completed during the reporting period.
Update	Ambient water quality and biological monitoring was undertaken through the reporting period in accordance with the Ambient Monitoring Plan (AMP). This work included a plume dilution study.
Comments	An Ambient Monitoring Report detailing the ambient water quality and biological monitoring undertaken in the Bass Strait receiving environment during the reporting period is currently in preparation and will be provided later in 2023.

5.6 Groundwater monitoring

No groundwater monitoring programs for Boat Harbour STP.

5.7 Inflow and infiltration (I&I)

The latest revision to the TasWater Inflow and Infiltration Management Plan includes details of the actions undertaken statewide to address I&I issues. Update to the actions completed will be provided in the next revision due September 2024.

A Multi Criteria Assessment was undertaken by TasWater in 2022 to prioritise I&I investigation and works state-wide. This catchment ranked 65 out of 79 in priority.

5.8 Sludge and Biosolids

The latest revision to the Sewage Sludge Management Plan (SSMP) includes full details of the actions undertaken during the reporting period, the most recent sludge profiling results, and upcoming annual desludging program.

This STP was fully compliant with the 2022-23 SSMP.

There are no sludge/biosolids dewatering facilities at this site, with sludge transferred via liquid sludge transport to the Wynyard STP for additional treatment. Sludge volume produced for this site is captured as part of the production from the Wynyard STP.

No stockpiling occurs at this site.

5.9 Non-compliance with other permit requirements

Table 5-G: EPN Non-compliances

EPN Condition	Description of non-conformance	Future Actions to be taken
E3 Effluent discharge limits	Discharge compliance with permit limits	See section 5.3 Discharge compliance with permit limits

EPN Condition	Description of non-conformance	Future Actions to be taken
Operations manual	No contemporary Operational Procedures Manual	New SharePoint based solution for OPMMs currently being developed. First version to be implemented in FY24.

5.10 Complaints and incident reporting

No complaints or incidents were recorded during the 2022-23 reporting period.

5.11 Any other relevant information

For further info on the Boat Harbour STP contact TasWater on 13 6992

www.taswater.com.au