

## 67 Strahan STP

### 67.1 Activity and report details

Activity name	Strahan STP		
Activity address	Lowana Rd, Strahan		
Permit number	Permit Conditions Environmental - 6223	Date of issue	11/12/2001
	EPN	8858/1	Date of issue 13/3/2013
Treatment level	Secondary Treatment		
Authorised Dry Weather Flows	1056 kL/day		
Key Influent Source	Residential		
Contact person	Kate Westgate		
Report author	Jayden Taylor		
Contact details	Environment@taswater.com.au		
Date of submission	30 September 2023		

Figure 67-1: Strahan Sewage Treatment Plant



## 67.2 Monitoring and compliance summary

### 67.2.1 Flow data

Table 67-A: Flow monitoring summary

	Influent	Effluent	Reuse
Location Name	Plant Influent	Macquarie Harbour	No reuse scheme
Coordinates	E 362539 N 5330795	E 360471 N 5331863	NA
Method of Measurement	In line meter	Estimate based on influent	NA
Date of last Calibration/Validation (if applicable).	8/02/2022	NA	NA

Table 67-B: Annual flow and rainfall data

Month	Average Daily Influent Volume (kL/day)	Rainfall (mm/month) BOM Station ID 97092	Discharge to Waters Total Effluent Volume (ML)	Discharge to Reuse Total Effluent Volume (ML)
July 2022	554	108.9	17.18	--
August 2022	649	186.1	20.11	--
September 2022	496	70.6	14.88	--
October 2022	565	152.4	17.52	--
November 2022	529	115.4	15.86	--
December 2022	493	55.4	15.29	--
January 2023	453	32.4	14.05	--
February 2023	455	92.2	12.74	--
March 2023	490	137.0	15.21	--
April 2023	492	120.5	14.76	--
May 2023	624	207.6	19.35	--
June 2023	675	192.0	20.24	--
Annual 2022-23	540	1470.5	197.19	--
% of Total Discharge	--	--	100.0%	--

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

### 67.2.2 Bypass events

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

### 67.3 Discharge compliance with permit limits

Table 67-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	20	50	--	40	10	8.5	12	200	50
90th percentile	--	--	--	--	--	--	--	--	--
50th Percentile	--	--	--	--	--	--	--	--	--
Minimum	--	--	--	--	--	6.5	--	--	--
Samples analysed									
Number required	12	12	--	12	12	12	12	12	12
Number analysed	12	12	-	12	12	12	12	12	12
Statistical summary									
Max	12.8	40	--	16.1	2.8	9.1	4.5	487	77.0
90th percentile	12.5	35	--	14.8	1.0	8.8	3.8	173	52.2
50th percentile	5.5	8	--	9.5	1.0	8.1	3.1	20	8.6
Min	0.2	5	--	5.3	1.0	7.2	1.3	10	4.0
EPN Limit Compliance									
% compliance with Maximum	100%	100%	--	100%	100%	--	100%	92%	83%
% compliance with 90th percentile	--	--	--	--	--	--	--	--	--
% compliance with 50th percentile	--	--	--	--	--	--	--	--	--
% compliance with pH range	--	--	--	--	--	67%	--	--	--

Table 67-D: Mass loads to the environment

Parameter	EPN Limit	Frequency	2022-23 result
Nitrogen (kg)	--	Annual	2120.7
Phosphorous (kg)	--	Annual	548.0
Method	Time weighted/Grab sample method		

Table 67-E: Performance Analysis (Discharge to environment)

Effluent compliance parameter	Date(s) of non-compliance	Reasons for non-compliance	Actions to improve performance
pH	8/11/2022 3/01/2023	20/03/2023 3/04/2023	Algae is believed to be the primary reason for elevated pH, and suspended solids. Algae is a source of oxygen and is fundamental to lagoon treatment. Most of the non-compliant results were in warmer months when algal blooms occur.
TSS	3/01/2023 6/02/2023		
E. coli	3/04/2023	The plant generally has good disinfection performance. The effluent E. coli limit of 200 MPN/100mL is difficult to be consistently met by a lagoon system.	No specific actions

No other parameters had exceedances in the reporting period.

#### 67.4 Reuse Annual Reporting

No Recycled Water Scheme associated with this STP.

#### 67.5 Ambient monitoring program

Table 67-F: Program details

<b>Program</b>	Strahan AMP
<b>Status</b>	No requirement for ambient monitoring in the reporting period.
<b>Update</b>	No ambient monitoring conducted during the reporting period.
<b>Comments</b>	NA

#### 67.6 Groundwater monitoring

Site status: Amber – Potential STP impact.

Strahan STP groundwater monitoring network consists of three monitoring bores, ID numbers SNGW1-3. Due to timing and resource constraints one round of sampling was completed in October 2022. No sample was taken from bore ID SNGW3 as bore remains dry.

Exceedances of the adopted guidelines for ammonia noted at bore ID SNGW1 with ammonia and total nitrogen concentrations increasing potentially indicating some leakage is occurring. The monitoring continues to find limited signs of STP impact at bore ID SNGW2.

Biannual sampling at the extended analytical suite is scheduled to continue at all bores and STP lagoons during the 2023-24 groundwater monitoring program to assess water classification and assist with the assessment.

#### 67.7 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 was ranked 54 out of 79 in priority.

#### 67.8 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.

No stockpiling occurs at this site.

Table 67-G: Desludging status and comments

Desludging Status	Comments
Low Priority	Desludging is outside of the current prioritisation planning schedule.

## 67.9 Non-compliance with other permit requirements

Table 67-H: EPN non-compliances

EPN Condition	Description of non-conformance	Future Actions to be taken
C8 Operational Procedures and Maintenance Manual	No contemporary Operational Procedures Manual.	New SharePoint based solution for OPMMs currently being developed. First version to be implemented by FY2024.
D3 Effluent quality limits for discharge to water	Discharge compliance with permit limits.	See section 67.3 Discharge compliance with permit limits and Performance Analysis.
EM1 Effluent Management	Ambient monitoring completed in 2019-20 but Discharge Management Plan overdue.	Submission timeframe TBC. Plan in development for DMP submission dates following on from agreed format between TasWater and EPA.
EM2 Effluent Reuse Feasibility Study	No Effluent Reuse Feasibility Study Scheduled.	Information to be provided in DMP.
EM3 Discharge Management Plan	Discharge Management Plan overdue.	Submission timeframe TBC. Plan in development for DMP submission dates following on from agreed format between TasWater and EPA.

## 67.10 Complaints and incident reporting

No complaints or incidents reported during the FY2022-23 reporting period.

## 67.11 Any other relevant information

For further information on Strahan STP please contact TasWater on 13 6992

[www.taswater.com.au](http://www.taswater.com.au)