

62. Sorell STP

62.1 Activity and report details

Activity name	Sorell STP		
Activity address	Giblin Drive, Sorell		
Permit number	Licence to Operate - 3299	Date of issue	23/02/1993
EPN	8551/2	Date of issue	14/02/2019
Treatment level	Secondary Treatment		
Authorised dry weather flows	810 kL/day		
Key influent source	Residential/Industrial 1 x Category 3 Customer		
Contact person	Kate Westgate		
Report author	George Fitzgibbon		
Contact details	Environment@taswater.com.au		
Date of submission	30 September 2024		

Figure 62-1: Sorell Sewage Treatment Plant



62.2 Monitoring and compliance summary

62.2.1 Flow data

Table 62-A: Flow monitoring summary

	Influent	Effluent	Reuse
Location name	Inlet	Pitt Water	Effluent Reuse Scheme - Penna Reuse
Coordinates	E 546023 N 5262134	E 546102 N 526002	E 546060 N 5262122
Method of measurement	Online Flow Meter	Online Flow Meter	Online Flow Meter
Date of last calibration/validation (if applicable).	04/06/24	04/06/24	04/06/24

Table 62-B: Annual flow and rainfall data

Month	Average daily influent volume (kL/day)	Rainfall (mm/month) BOM Station ID 94248	Discharge to waters total effluent volume (ML)	Discharge to reuse total effluent volume (ML) *
July 2023	572	3.8	20.84	0.00
August 2023	599	11.7	9.29	9.29
September 2023	666	21.0	11.33	8.66
October 2023	649	50.7	0.00	20.10
November 2023	622	39.3	0.00	18.65
December 2023	617	52.6	0.00	19.12
January 2024	628	25.6	0.00	19.47
February 2024	593	2.6	0.00	17.19
March 2024	613	10.6	0.00	19.02
April 2024	649	56.3	0.00	19.47
May 2024	641	32.3	0.00	19.86
June 2024	603	47.1	0.00	18.10
Annual 2023-24	623	353.6	41.45	188.92
% of total discharge	--	--	18.0%	82.0%

* BGA inhibited ability to reuse from Penna STP which caused effluent discharge via Sorell STP outfall

2023-24 monthly flow data was submitted directly to the EPA.

62.3 Bypass events

There were no bypasses reported during the period.

62.4 Discharge compliance with permit limits

Table 62-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	36.0	45	--	47.0	4.0	8.5	8.0	750	24.0
90th percentile	--	--	--	--	--	--	--	--	--
50th percentile	--	--	--	--	--	--	--	--	--
Minimum	--	--	--	--	--	6.5	--	--	--
Samples analysed									
Number required	12	12	--	12	12	12	12	12	12
Number analysed	3	3	--	3	3	4	3	3	3
Statistical summary									
Maximum	3.0	19	--	8.1	1.9	7.5	7.2	52	41.0
90th percentile	2.6	18	--	8.0	1.8	7.4	6.7	46	35.5
50th percentile	1.2	15	--	7.7	1.5	7.0	4.7	20	13.4
Minimum	0.5	6	--	7.3	1.0	7.0	3.4	10	12.6
EPN limit compliance									
% compliance with maximum	100%	100%	--	100%	100%	--	100%	100%	67%
% compliance with 90th percentile	--	--	--	--	--	--	--	--	--
% compliance with 50th percentile	--	--	--	--	--	--	--	--	--
% compliance with pH range	--	--	--	--	--	100%	--	--	--

Note: Percentages reflective of complete data set for the year. Sampling only undertaken when discharging to environment.

Table 62-D: Mass loads to the environment

Parameter	EPN limit	Frequency	2023-24 result
Nitrogen (kg)	--	Annual	323.0
Phosphorous (kg)	--	Annual	232.2
Method	Time weighted/grab sample method		

Table 62-E: Performance analysis (discharge to environment)

Effluent compliance parameter	Date(s) of non-compliance	Reasons for non-compliance	Actions to improve performance
TSS	14/08/2023	Reason unknown. It is suspected that a control issue may have resulted in poor performance in our solids separation process.	No specific actions undertaken in reporting period.

Note: Non-compliances only identified for the times STP has discharged to water

No other parameters had exceedances in the reporting period.

62.5 Reuse annual reporting

As this site discharges to Penna Recycled Water Scheme no compliance samples are taken. See Penna STP AER for details on recycled water quality and scheme performance.

62.6 Ambient monitoring program

Table 62-F: Program details

Program	None
Status	NA
Update	NA
Comments	Discharges to Sorell Rivulet from Sorell (& Midway Point) occurred in July, August and September 2023. No ambient monitoring conducted in the reporting period.

62.7 Groundwater monitoring

Site Status: Amber – (2022–23 report)

Sorell STP groundwater monitoring network consists of two monitoring bores, bore ID SOGW1 located south of the main STP lagoon, and SOGW2, located south-east of the sludge pond. Biannual sampling was completed at both bores in February and June 2024. TasWater has put measures in place for the 2024–25 sampling program to address scheduling and resourcing delays experienced in recent years.

Following delays, the 2023–24 report will be finalised and available in October 2024. Any actions to address identified potential issues will be determined following the hydrogeological review. Previous monitoring suggested likely impacts at bore ID SOGW2 due to increasing trends and elevated concentrations of several analytes above adopted guideline criterion. Impact at SOGW1 not as evident due to its location adjacent to the river floodplain.

Biannual sampling at the standard suite is scheduled to continue in the 2024–25 groundwater monitoring program.

62.8 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 2024 to prioritise I&I investigation and works state-wide. This catchment was ranked 7 out of 108 in priority. Actions in the period included:

- Vapour testing and field investigation have been completed

- CCTV of 1,900m sewer mains
- Relined 1,600m of sewer mains

62.9 Sludge and biosolids

The latest revision to the Sewage Sludge Management Plan (SSMP) includes full details of the actions undertaken during the reporting period.

This STP is fully compliant with the 2023–24 SSMP.

Biosolids are removed regularly from site, no stockpiling occurs.

Table 62-G: Biosolids sludge classification

Parameter	Number of samples	Maximum (mg/kg)	Mean (mg/kg)	Minimum (mg/kg)	BACC (mg/kg)	Contaminant classification
Arsenic	12	3.5	2.2	0.3	3.9	A
Cadmium	12	1.2	0.7	0.3	1.3	B
Chromium	12	31.7	19.8	7.1	34.7	A
Copper	12	614.0	235.2	121.0	484.2	B
Lead	12	24.0	12.3	6.7	21.6	A
Mercury	12	1.3	0.8	0.2	1.4	B
Nickel	12	20.9	16.1	8.2	24.0	A
Zinc	12	715.0	539.9	283.0	768.5	B

Table 62-H: Volume and disposal destination

Quantity (DST)	Average solids content	Stabilisation method	Stabilisation grade	Contamination grade	Biosolids classification	End use destination
20.2	13.99%	None	U/C	B	U/C	Plenty Composting

Notes: DST = Dry solid tonne. U/C = Unclassified

62.10 Non-compliance with other permit requirements

Table 62-I: EPN non-compliances

EPN condition	Description of non-conformance	Future actions to be taken
A1 Odour management	Odour complaints	See Section 62.11 for odour complaints related to this condition
EF2 Effluent quality limits for discharge to water	Discharge compliance with permit limits	See section 62.4 Discharge compliance with permit limits and Performance Analysis
EF7 Cessation of discharge to Pitt Water	Discharge occurred on two occasions. Discharged was due to the Pittwater outfall due to high flows into Sorell STP	The Penna Reuse Expansion Project has been completed.

62.11 Complaints and incident reporting

Table 62-J: Complaints Reporting

Date	Category	Details	Mitigation actions
05/10/2023	Odour	Strong odour coming from treatment plant	Sludge is de-watered using a fan press to reduce odour
30/08/2023	Odour	Strong odour coming from treatment plant	As above

No incidents recorded in FY2023–24 period.

62.12 Any other relevant information

Table 62-K: Projects or significant operational events that occurred in FY 2023–24:

Project or significant operational event	Progress
Penna Reuse Expansion Project.	The Penna Reuse Expansion Project has been completed.
Inflow and Infiltration work.	Ongoing discussions with Sorell council and private property owners to address cross-connections.
Unauthorised disposal of unstabilised biosolids. TasWater notified EPA that a quantity of biosolids had been mistakenly transferred to farmland for land spreading.	Improved process with waste transport contractor to ensure loads are sent to correct disposal locations.

For further information on the Sorell STP please contact TasWater on 13 6992

www.taswater.com.au