

53 Rosebery STP

53.1 Activity and report details

Activity name	Rosebery STP		
Activity address	Off Chester Ave, Rosebery		
Permit number	Permit Conditions Environmental - 8847	Date of issue	4/11/2014
	EPN	--	Date of issue
Treatment level	Tertiary Treatment		
Authorised Dry Weather Flows	242 kL/day		
Key Influent Source	Residential/Industrial		
Contact person	Kate Westgate		
Report author	Jayden Taylor		
Contact details	Environment@taswater.com.au		
Date of submission	30 September 2023		

Figure 53-1: Rosebery STP



53.2 Monitoring and compliance summary

53.2.1 Flow data

Table 53-A: Flow monitoring summary

	Influent	Effluent	Reuse
Location Name	Sewer Inlet	Stitt River	No reuse scheme
Coordinates	E 377795 N 5373664	E 379440 N 5373185	NA
Method of Measurement	In line meter	In line meter	NA
Date of last Calibration/Validation (if applicable).	21/07/23	21/07/23	NA

Table 53-B: Annual flow and rainfall data

Month	Average Daily Influent Volume (kL/day)	Rainfall (mm/month) BOM Station ID 97093	Discharge to Waters Total Effluent Volume (ML)	Discharge to Reuse Total Effluent Volume (ML)
July 2022	823	135.4	26.29	--
August 2022	1,199	232.4	33.75	--
September 2022	944	124.8	30.80	--
October 2022	581	151.6	23.03	--
November 2022	1,033	210.0	32.88	--
December 2022	653	101.8	27.19	--
January 2023	1,032	24.8	17.14	--
February 2023	730	60.6	20.48	--
March 2023	648	157.4	24.33	--
April 2023	716	164.0	26.48	--
May 2023	1,351	258.8	41.88	--
June 2023	746	289.8	22.39	--
Annual 2022-23	873	1911.4	326.64	--
% of Total Discharge	--	--	100.0%	--

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

53.2.2 Bypass events

The STP was designed to bypass high flow events during wet weather. Due to the amount recorded, specific dates can be provided on request.

Table 53-C: Bypass events summary for RSBST01-ON-1

Bypass ID:	RSBST01-ON-1	
Bypass description:	Inlet Pump Station overflow to outfall	
Treatment bypassed:	Secondary Treatment, Filtration, Disinfection (UV)	
Treatment level of impacted effluent:	Screened	
Flows exceeding:	1.1 ML/d	
Discharge location:	Stitt River: 377875E, 5373831N (GDA94)	
Total number of bypasses	Total volume (ML)	Mitigation Measures
61	51.3	No specific actions undertaken

53.3 Discharge compliance with permit limits

Table 53-D: 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	15	--	15	10	8.5	3	200	20
90th percentile	2	10	--	10	5	--	1	--	15
50th Percentile	1	5	--	7	2	--	0.5	--	10
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	1.0	6	--	9.3	1.0	7.5	1.9	2495	12.6
90th percentile	0.6	5	--	9.1	1.0	7.3	1.8	1240	9.9
50th percentile	0.2	5	--	5.4	1.0	7.1	0.8	10	4.3
Min	0.1	5	--	3.5	1.0	6.8	0.2	10	4.0
EPN Limit Compliance									
% compliance with Maximum	100%	100%	--	100%	100%	--	100%	83%	100%
% compliance with 90th percentile	100%	100%	--	100%	100%	--	67%	--	100%
% compliance with 50th percentile	100%	92%	--	67%	100%	--	25%	--	92%
% compliance with pH range	--	--	--	--	--	100%	--	--	--

Table 53-E: Mass loads to the environment

Parameter	EPN Limit	Frequency	2022-23 result
Nitrogen (kg)	--	Annual	1997.6
Phosphorous (kg)	--	Annual	292.0
Method	Time weighted/Grab sample method		

Table 53-F: Performance Analysis (Discharge to environment)

Effluent compliance parameter	Date(s) of non-compliance	Reasons for non-compliance	Actions to improve performance
Phosphorus	12 months 90 th percentile limit exceedance	The non-compliant phosphorus is due to increased influent concentration and the PAC dosing being offline.	The PAC dosing location was changed from upstream of the filters to the bioreactor. Further PLC works are required to allow dosing in the bioreactor.
	12 months 50 th percentile limit exceedance		
E. coli	11/08/2022 12/12/2022	The non-compliant E. coli is likely due to low UV intensity in those time periods.	No specific actions.

No other parameters had exceedances in the reporting period.

53.4 Reuse Annual Reporting

No Recycled Water Scheme associated with this STP.

53.5 Ambient monitoring program

Table 53-G: Program details

Program	Rosebery AMP
Status	Complete - 6 monthly water quality and biological monitoring
Update	Water quality and biological monitoring completed as per the EPN in the 2022-2023 report period. The biological and water quality monitoring reports will be provided separately to this AER.
Comments	<p>Biological monitoring indicated no significant evidence of localised impact from the STP outfall on the condition of the macroinvertebrate fauna at the site immediately below the outfall. The Stitt River is in reasonably good condition.</p> <p>The water quality monitoring showed that discharge of effluent into the Stitt River does not compromise the Protected Environmental Values (PEVs) of the receiving environment. The report (to be submitted to EPA) states that the receiving environment is relatively stable and a reduction in frequency of sampling (biennial sampling instead of annual) should be considered.</p>

53.6 Groundwater monitoring

No groundwater monitoring program associated with the STP.

53.7 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 10 out of 79 in priority.

53.8 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 is fully compliant with the 2022-23 SSMP.

Biosolids are removed regularly from site, no stockpiling occurs. All biosolids are contaminated with metals and disposed of accordingly.

Table 53-H: Volume and disposal destination

Quantity (DST)	Average solids content	Stabilisation method	Stabilisation Grade	Contamination Grade	Biosolids Classification	End use destination
14.22	12%	None	U/C	U/C	U/C	Dulverton

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

53.9 Non-compliance with other permit requirements

Table 53-I: EPN non-compliances

EPN Condition	Description of non-conformance	Future Actions to be taken
Q1 Regulatory Limits	ADF exceeds ADWF EPN limit (242kl/d). Flow analysis from 2015-21 indicates that AWDF is 550kl/d. Operational Manual stipulates Rosebery STP has a design capacity of 415kl/d.	No specific actions.
EF2 Effluent quality limits for discharge to	Discharge compliance with permit limits	See section 53.3 Discharge Compliance with Permit Limits.
OP1 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 FY24.

53.10 Complaints and incident reporting

No complaints received or incidents occurred in the 2022-23 reporting period.

53.11 Any other relevant information

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

www.taswater.com.au