

51. Riverside STP

51.1 Activity and report details

Activity name	Riverside STP		
Activity address	Benson Court, Riverside, Launceston		
Permit number	Licence to Operate – 3595	Date of issue	31/07/1989
EPN	8106/1	Date of issue	12/06/2013
Treatment level	Secondary Treatment		
Authorised dry weather flows	2800 kL/day		
Key influent source	Residential/Industrial		
Contact person	Kate Westgate		
Report author	Luisa Romero (Environmental Scientists)		
Contact details	Environment@taswater.com.au		
Date of submission	30 September 2024		

Figure 51-1: Riverside Sewage Treatment Plant



51.2 Monitoring and compliance summary

51.2.1 Flow data

Table 51-A: Flow monitoring summary

	Influent	Effluent	Reuse
Location name	Plant Inlet	Tamar River	Riverside Golf Club
Coordinates	E 509511 N 5414834	E 509557 N 5414876	E 509170 N 5415140
Method of measurement	In line meter	Level Sensor	In line meter
Date of last calibration/validation (if applicable).	09/01/2024	14/12/2023	14/12/2023

Table 51-B: Annual flow and rainfall data

Month	Average Daily Influent Volume (kL/day)	Rainfall (mm/month) BOM Station ID 91237	Discharge to Waters Total Effluent Volume (ML)	Discharge to Reuse Total Effluent Volume (ML)
July 2023	2,087	83.4	64.71	--
August 2023	1,968	51.0	60.99	--
September 2023	1,552	29.7	46.57	--
October 2023	1,330	37.0	41.24	--
November 2023	1,276	30.5	38.29	--
December 2023	1,346	49.4	41.73	--
January 2024	1,369	57.2	42.43	--
February 2024	1,221	9.2	35.42	--
March 2024	1,195	14.4	37.06	--
April 2024	1,342	50.4	40.26	--
May 2024	1,282	34.4	39.75	--
June 2024	1,656	74.4	49.67	--
Annual 2023-24	1,474	521.0	538.11	--
% of Total Discharge	--	--	100.0%	--

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

51.3 Bypass events

Table 51-C: Bypass events summary

Bypass ID:	RIVST01-OP				
Bypass description:	Primary effluent overflow to outfall				
Treatment bypassed:	Secondary Treatment, Disinfection (Chlorine)				
Treatment level of impacted effluent:	Screened, Primary Treatment				
Flows exceeding:	100L/s (Approximate)				
Discharge location:	Tamar River: 509655E, 5414775N (GDA94)				
Start date / time	End date / time	Duration	Volume estimate	Cause	Response actions
08/07/23 08:41	08/07/23 10:24	1.7 h	5 kL	Rainfall Event	No specific actions undertaken
28/07/23 07:40	28/07/23 13:32	5.9 h	5 kL	Rainfall Event	No specific actions undertaken
17/01/24 12:31	17/01/24 13:02	0.5 h	3 kL	Rainfall Event	No specific actions undertaken
08/03/24 06:31	08/03/24 07:02	0.5 h	8 kL	Power Failure	Rectification
19/04/24 09:25	19/04/24 10:02	0.6 h	7 kL	Power Failure	Rectification
11/06/24 10:06	13/06/24 09:19	47.2 h	10 kL	Rainfall Event	No specific actions undertaken

51.4 Discharge compliance with permit limits

Table 51-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	--	40	1.5	55.0	10.0	8.5	12.0	1000	60.0
90th Percentile	--	--	--	--	--	--	--	--	--
50th Percentile	--	--	--	--	--	--	--	--	--
Minimum	--	--	--	--	--	6.5	--	--	--
Samples analysed									
Number required	12	12	12	12	12	12	12	12	12
Number analysed	12	12	12	12	12	12	12	12	12
Statistical summary									
Maximum	37.3	87	1.49	51.8	10.7	8.1	7.5	17329	31.0
90th Percentile	34.3	51	1.48	46.6	6.5	7.6	7.3	7107	24.5
50th Percentile	29.7	29	1.24	41.4	5.5	7.4	6.5	1388	18.8
Minimum	18.5	22	1.02	32.1	4.3	6.9	3.3	141	12.8
EPN Limit Compliance									
% compliance with Maximum	--	67%	100%	100%	92%	--	100%	50%	100%
% compliance with 90th percentile	--	--	--	--	--	--	--	--	--
% compliance with 50th percentile	--	--	--	--	--	--	--	--	--
% compliance with pH range	--	--	--	--	--	100%	--	--	--

Table 51-E: Mass loads to the environment

Parameter	EPN Limit	Frequency	2023-24 result
Nitrogen (kg)	--	Annual	21390.0
Phosphorous (kg)	--	Annual	3114.4
Method	Flow weighted/Composite method		

Table 51-F: Performance analysis (discharge to environment)

Effluent compliance parameter	Date(s) of non-compliance	Reasons for non-compliance	Actions to improve performance
E. coli	12/07/2023 13/09/2023 9/11/2023 13/03/2024 17/04/2024 12/06/2024	The chlorine contact tank is undersized to achieve necessary contact times at high flows. Limitations in flow paced chlorine dose control also results in poor performance when dose rates cannot be automatically adjusted to demand. Exacerbated by rainfall events in July, September, March and June.	Regular monitoring of chlorine residual to ensure optimal chlorine dose rate. Investigate options for an additional chlorine contact tank analyser to improve automatic dose control. Improvement actions to be explored as part of LSIP.
BOD	12/07/2023 13/09/2023 9/11/2023 12/06/2024	Trickling filter effluent contains high particulate solids (biofilm accumulation on the media surface) which is difficult to control and capture in the humus tank. These solids contribute to elevated BOD. Exacerbated by rainfall events in July, September and June.	Improvement actions to be considered as part of LSIP.
O&G	13/09/2023	Limited treated capacity for Oil and Grease removal.	

No other parameters had exceedances in the reporting period.

51.5 Reuse annual reporting

The Riverside STP supplies treated effluent for irrigation purposes to the Riverside recycled water scheme (RWS) at the Riverside Golf Club. No recycled water has been supplied to the Golf Club for three consecutive years. As such Riverside Golf Course was excluded from the annual soil sampling and compliance audit program for the 2023–24 reporting period. Historic non-compliances of inadequate buffer zones and signage will be reviewed with Golf Course prior to provision of recycled water in the future.

51.6 Ambient monitoring program

Table 51-G: Program details

Program required	NA – No requirement for ambient monitoring in the reporting period
Status (e.g. commenced, not yet commenced)	NA
Update	NA
Comments	NA

51.7 Groundwater monitoring

No groundwater monitoring program associated with the STP.

51.8 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 101 out of 108 in priority.

51.9 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 was deemed as non-compliant with the 2023–24 Sewage Sludge Management Plan due to further clarification being required around contaminant grading and no stabilisation verification report submitted.

Biosolids are removed regularly from site, no stockpiling occurs.

Due to continued issues with the centrifuge, digested sludge was transferred to Ti Tree Bend STP. A total of 6177kL was transferred to Ti Tree Bend STP for the reporting period.

Table 51-H: Biosolids sludge classification

Parameter	Number of samples*	Maximum (mg/kg)	Mean (mg/kg)	Minimum (mg/kg)	BACC (mg/kg)	Contaminant classification
Arsenic	3	2.9	2.8	2.7	3.0	A
Cadmium	3	1.3	1.1	0.9	1.5	B
Chromium	3	25.3	22.6	19.1	28.9	A
Copper	3	319.0	293.3	262.0	351.2	B
Lead	3	26.2	25.6	24.9	27.0	A
Mercury	3	2.0	1.7	1.4	2.3	B
Nickel	3	21.8	20.5	18.4	24.1	A
Zinc	3	1420.0	1330.0	1200.0	1560.7	B

* Sludge was sent to Ti Tree Bend for further processing due to centrifuge failure.

Table 51-I: Volume and disposal destination

Quantity (DST)	Average solids content	Stabilisation method	Stabilisation grade	Contamination grade	Biosolids classification	End use destination
4.6	15.87%	Anaerobic digestion	B	B	2	Agriculture Logan Farm

Notes: DST = Dry solid tonne.

51.10 Non-compliance with other permit requirements

Table 51-J: EPN non-compliances

EPN condition	Description of non-conformance	Future actions to be taken
EF2 Effluent quality limits for discharge to the Tamar River	Discharge compliance with permit limits	See section 51.3 Discharge compliance with permit limits and Performance Analysis
EM3 Discharge Management Plan	Discharge Management Plan overdue.	TasWater acknowledges the non-compliance associated with the DMP condition. We are working towards the intent of the EPN condition to prioritise discharge risk reduction projects in line with our EPA endorsed Wastewater Risk Management Plan and Price and Service Plan process. Riverside is included within LSIP for rationalisation to Ti Tree Bend.
WM2 Sewage Sludge Management Plan	This STP was deemed as non-compliant with the 2023-24 Sewage Sludge Management Plan due further clarification being required around contaminant grading and no stabilisation verification report submitted.	Full contaminant summary will be provided in 2024-25 SSMP as well as details on status of stabilisation report.

51.11 Complaints and incident reporting

No complaints or incidents reported during the FY2023-24 reporting period.

51.12 Any other relevant information

Table 51-M: Projects or significant operational events that occurred in FY 2023-24

Project or significant operational event	Progress
Launceston Sewerage Improvement Program (LSIP)	Opportunities for rationalisation of Riverside STP flows are being investigated as part of LSIP.

For further information on the Riverside STP please contact TasWater on 13 6992 or www.taswater.com.au.