

54. Rosny STP

54.1 Activity and report details

Activity name	Rosny STP		
Activity address	Rosny Esplanade, Rosny, Hobart		
Permit number	Licence to Operate - 3505	Date of issue	25 July 1988
EPN	632/2	Date of issue	16/05/2019
Treatment level	Secondary Treatment		
Authorised dry weather flows	7500 kL/day		
Key influent source	Residential/Industrial 1 x Category 3 Customers		
Contact person	Kate Westgate		
Report author	George Fitzgibbon		
Contact details	Environment@taswater.com.au		
Date of submission	30 September 2025		

Figure 54--1: Rosny Sewage Treatment Plant



54.2 Monitoring and compliance summary

54.2.1 Flow data

Table 54-A: Flow monitoring summary

	Influent	Effluent	Reuse
Location name	Inlet	Derwent River	Effluent Reuse Scheme - Coal River
Coordinates	E 529342 N 5253111	E 529184 N 5253117	E 529213 N 5253147
Method of measurement	In line meter	Level sensor	In line meter
Date of last calibration/validation (if applicable)	13/07/2024	13/07/2024	13/07/2024

Table 54-B: Annual flow and rainfall data

Month	Average daily influent volume (kL/day)	Rainfall (mm/month) BOM Station ID 94030	Discharge to waters total effluent volume (ML)	Discharge to reuse total effluent volume (ML)
July 2024	8,643	82.8	158.66	109.29
August 2024	7,407	82.8	140.59	96.47
September 2024	8,721	70.2	259.70	1.93
October 2024	6,494	39.7	152.58	48.73
November 2024	6,227	21.3	90.66	96.15
December 2024	8,020	116.5	151.77	96.85
January 2025	6,114	26.6	168.28	21.25
February 2025	6,830	13.6	189.01	2.22
March 2025	5,845	34.2	179.05	2.14
April 2025	6,182	33.7	183.47	1.99
May 2025	6,550	63.8	201.04	1.99
June 2025	6,709	49	199.50	1.77
Annual 2024-25	6,980	634.2	2074.32	480.77
% of total discharge	--	--	81.2%	18.8%

2024-25 monthly flow data was submitted directly to the EPA.

54.3 Bypass events

Bypass ID:	RSNST01-OND				
Bypass description:	Equalisation tank overflow to filtration				
Treatment bypassed:	Screening (Partial), Secondary Treatment				
Treatment level of impacted effluent:	Screened (Partial), Filtered, Disinfected (Chlorine)				
Flows exceeding:	~180 L/s				
Discharge location:	Derwent River: 528744E, 5252905N (GDA94)				
Start date / time	End date / time	Duration	Volume estimate	Cause	Response actions
15/07/24 09:47	15/07/24 18:53	9.1 h	3149 kL	Rainfall Event	<p>To help reduce bypass events state-wide, during FY2024-25 TasWater has spent \$1.2 million on the identification, reification and monitoring of inflow and infiltration (I&I) within our systems. During FY2025 -26 we will be spending a further \$0.8 million on I&I works.</p> <p>Works in the Rosny catchment for this period included:</p> <ul style="list-style-type: none"> • Field investigation and defect identification ongoing • Further areas for source detection investigation have been planned <p>Following the Sells Point Upgrade completion, during wet weather conditions, the effluent in the effluent balance tank may be discharged to the new local Sells Point effluent outfall. This will only occur under prolonged wet weather events. The local Sells Point effluent outfall will have a peak hydraulic capacity of 1,340 L/s to accommodate all wet weather flows pumped to the new STP. All wet weather discharges will be treated and no chlorine will be added as disinfection is achieved through the membranes.</p>
07/12/24 09:02	07/12/24 17:52	8.8 h	4320 kL	Rainfall Event	No specific actions undertaken
24/05/25 10:12	24/05/25 13:52	3.7 h	765 kL	Rainfall Event	No specific actions undertaken

54.4 Discharge compliance with permit limits

Table 54-C: Compliance summary

Parameter	Ammonia	cBOD ₅	Chlorine	Nitrogen	Oil and grease	pH	Phosphorous	E. coli	Enterococci	Total suspended solids
Permit/EPN limit	mg/L	mg/L	mg/L	mg/L	mg/L	Units	mg/L	MPN/100ml	mg/L	mg/L
Maximum	25	--	1	--	--	8.5	--	--	--	--
90th percentile	--	20	--	--	--	--	--	500	4,000	20
50th percentile	--	15	--	--	--	--	--	200	1,000	10
Minimum	--	--	--	--	--	6.5	--	--	--	--
Samples analysed										
Number required	52	52	52	52	52	52	52	52	52	52
Number analysed	52	56	56	52	52	52	52	52	52	52
Statistical summary										
Maximum	35.0	23.0	2.7	48.6	2.8	7.7	6.4	198,630	92,080	36.0
90th percentile	30.2	14.0	2.0	43.9	1.7	7.4	5.6	24,196	24,196	15.2
50th percentile	24.8	8.0	1.3	34.9	1.0	7.2	3.8	1363	7,701	7.4
Minimum	4.1	5.0	0.0	15.1	1.0	6.5	1.5	10	10	4.0
EPN limit compliance										
% compliance with maximum	52%	--	38%	--	--	100%	--	--	--	--
% compliance with 90th percentile	--	96%	--	--	--	--	--	44%	46%	96%
% compliance with 50th percentile	--	91%	--	--	--	--	--	33%	21%	67%
% compliance with pH range	--	--	--	--	--	100%	--	--	--	--

Table 54-D: Mass loads to the environment

Mass Loads	EPN limit	Frequency	2024-25 result
Nitrogen (kg)	24638	Annual	70,653.5
Phosphorous (kg)	6023	Annual	7,976.4
Method	Flow weighted/Composite method		

Table 54-E: Performance analysis (discharge to environment)

Effluent compliance parameter	Date(s) of non-compliance	Reasons for non-compliance	Actions to improve performance
Ammonia	18/03/2025 1/04/2025 8/04/2025 13/05/2025	The treatment process is not specifically designed to remove ammonia; however incidental ammonia removal occurs at times.	No specific actions undertaken in reporting period.
Chlorine	24/09/2024 1/04/2025 8/04/2025 15/04/2025 23/04/2025	6/05/2025 13/05/2025 3/06/2025 10/06/2025 17/06/2025 17/06/2025 24/06/2025	The chlorine contact tank volume is inadequate such that the chlorine concentration does not decay sufficiently prior to discharge to the environment.
E. coli	12-month 90 th percentile limit exceeded		
Enterococci	12-month 90 th percentile limit exceeded		
			No specific actions undertaken in reporting period UV disinfection upgrade will improve the performance of the disinfection system to be completed in FY2025.

No other parameters had exceedances in the reporting period.

54.5 Reuse annual reporting

The Rokeby, Rosny, Cambridge and Richmond STP's supply recycled water for irrigation purposes to the Clarence recycled water scheme (RWS). Currently twenty-six properties in the Coal Valley and Seven Mile Beach area connected to the recycled water scheme. The scheme operates under the current 2019-2024 Environmental Management Plan.

Table 54-F: Reuse Compliance Summary

Parameter	cBOD5	pH	E. coli
Permit/EPN limit	mg/L	Units	MPN/100ml
Maximum	30	9.0	10,000
90th Percentile	--	--	--
50th Percentile	--	--	1,000
Minimum	--	5.5	--
Samples analysed			
Number required	52	52	52
Number analysed	56	52	62
Statistical summary			
Maximum	23.0	7.7	198,630
90th percentile	14.0	7.4	24,196
50th percentile	8.0	7.2	3,744
Minimum	5.0	6.5	10
EPN Limit Compliance			
% compliance with Maximum	100%	--	56%
% compliance with 90th percentile	--	--	--
% compliance with 50th percentile	--	--	48%
% compliance with pH range	--	100%	--

Note: Percentages reflective of complete data set for the year. *E. coli* samples only taken when discharging to reuse at time of sampling.

Table 54--G: Performance analysis (Discharge to reuse)

Reuse compliance parameter	Date(s) of non-compliance	Reasons for non-compliance	Actions to improve performance
E. coli	7/01/2025 10/12/2024 13/08/2024 6/08/2024 30/07/2024	See Table 54-E	See Table 54-E
	12-month 50 th percentile limit exceeded		

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

Annual soil sampling was completed at forty-one sites on twenty-three properties across the Clarence RWS in July 2024. The distribution of the sampling sites was based on the established sampling program and consideration of the irrigation application rates for the past irrigation and proposed coming irrigation season. Four sites (44MOR, 46LAZ, 51Low, 61GRI, and 62CRA) were added to the 2024-25 soil sampling program. No sites were removed. Annual compliance audits were completed at twenty-four properties during the 2024-25 reporting period. The field component of the audits were completed in conjunction with the soil monitoring program and follow-up correspondence in September 2024. A summary of the findings of the programs is provided in the below table.

Table 54--H: Annual recycled water scheme compliance audit and soil monitoring summary

Program	Compliance audit	Soil monitoring
Outcomes	<p>Overall compliance level: 86%</p> <p>25% properties fully compliant - 6 out of 24 properties (down from 7).</p> <p>Minor Non-compliance: 66% properties recorded minor non-compliances (up from 49%) - inadequate signage)</p> <p>Seven properties recorded recycled water irrigation outside IEMP requirements (withholding times and/or buffer zones and inadequate fencing of nominated recycled water storage)</p>	<p>Overall, soil health and fertility do not appear to be adversely impacted through recycled water irrigation.</p> <p>From a soil structure perspective, sodicity is the main soil concern, In 2024 average ECse were slightly lower and average Cl levels slightly decreased. Average ECse and Cl levels continue to fluctuate between sampling events. 7% Sites considered saline, 20% considered slightly saline and 73% sites within the recommended range. Average ESP levels in 2024 remained similar to previous years. 29% sites considered sodic, 12% slightly sodic and 59% within the recommended range. No long-term trends have been identified. A review of recycled water quality (salinity and SAR) indicates a very slight risk of soil permeability loss resulting from the application of recycled water and highly unlikely future sodicity issues will develop due to recycled water application.</p>
Comments	<p>Inadequate signage remains the main non-compliance across the scheme.</p> <p>The nine inoperable recycled water supply meters were replaced in 2024-25. TasWater will continue replacing faulty meters in 2025-26. Clarence RWS EMP 2019-2025 is planned for review in and submission 2025-26.</p>	<p>The increasing long-term trend in average P and K continues however average P levels has stabilised in recent years. In 2024 average P was classed high, with average K levels moderate and average S levels considered low-moderate across the scheme. The elevated nutrient levels (average P and K) have been assessed as not directly attributed to the application of recycled water but correlate to other nutrient sources.</p>

Key: ECse = Electrical Conductivity at saturation extent, Cl = Chloride, ESP = Exchangeable sodium percentage, P = Phosphorous, K = Potassium, S = Sulphur

RWS Groundwater Status: Amber

The Clarence RWS groundwater monitoring network currently consists of thirty-six monitoring bores across sixteen properties. Four bores (ID's CL-RRPGW9, CL-SHGW2, CL-TGCGW3 and CL-RHCGW4 are associated with recycled water storage dams.

6-monthly sampling was completed at thirty-three bores in July 2024 with annual sampling completed in February 2025 at thirty bores. Three bores across two properties could not be accessed during the annual sampling round. No sampling was completed during the 2024-25 groundwater monitoring event at one property as the bore could not be located.

The 2024-25 groundwater monitoring event report found groundwater chemistry appears to be generally consistent with previous years. The review of the data and recycled water use suggests that overall, the irrigation of recycled water is having no definitive impact on groundwater quality. Of the fifteen properties sampled, two properties recorded no exceedances above the adopted guideline criterion for key analytes. Four properties recorded evidence of an increasing trend (Mann-Kendall test) of at least one key analyte in at least one monitoring bore. Six monitoring bores require repair or maintenance activities. Two bores associated with storages require additional sampling and or maintenance work to investigate trends.

6-monthly sampling will continue at all monitoring bores during the 2025-26 monitoring program. Additional surface water monitoring will be completed at Clarence Recycled Water Storage (Duckhole Dam) to allow for further chemical classification.

54.6 Ambient monitoring program

Table 54--I: Program details

Program	NA – No requirement for ambient monitoring in the reporting period
Status	NA
Update	NA
Comments	NA

54.7 Groundwater monitoring

No groundwater monitoring program associated with the STP.

54.8 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.

A Multi Criteria Assessment was undertaken by TasWater in 2024 to prioritise I&I investigation and works state-wide. This catchment was ranked 12 out of 108 in priority. Works this period included:

- Field investigation and defect identification ongoing
- Further areas for source detection investigation have been planned

54.9 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 assessed as compliant with the 2024-25 SSMP.

Biosolids are removed regularly from site, no stockpiling occurs.

Table 54-J: Biosolids sludge classification

Parameter	Number of samples	Maximum (mg/kg)	Mean (mg/kg)	Minimum (mg/kg)	BACC (mg/kg)	Contaminant classification
Arsenic	12	2.7	1.8	1.1	2.6	A
Cadmium	12	1.4	0.9	0.6	1.3	B
Chromium	12	17.6	12.9	10.1	17.5	A
Copper	12	187.0	139.8	87.8	208.5	B
Lead	12	22.3	15.3	10.3	22.6	A
Mercury	12	0.8	0.5	0.2	0.9	A
Nickel	12	27.4	21.4	16.6	27.8	A
Zinc	12	639.0	525.7	410.0	664.7	B

BACC = biosolids adjusted contaminant concentration

Table 54-K: Volume and disposal destination

Quantity (DST)	Average solids content (%)	Stabilisation method	Stabilisation grade	Contamination grade	Biosolids classification	End use destination
563.1	18.0	Hydrated Lime	B	B	2	Whitemarsh Farm, Blue Hills Farm, Coronation Hotel, Thorpe Farm

Notes: DST = Dry solid tonne.

54.10 Non-compliance with other permit requirements

Table 54-L: EPN non-compliances

EPN condition	Description of non-conformance	Future actions to be taken
EF3 Effluent discharge limits	Discharge compliance with permit limits	See section 54.4 Discharge compliance with permit limits and Performance Analysis
EF5 Reuse discharge limits	Discharge compliance with reuse permit limits	See section 54.5 Reuse Annual Reporting and Performance Analysis
EF4 Enterococci Limits for discharge	Discharge compliance with permit limits for Enterococci exceeded	See section 54.4 Discharge compliance with permit limits and Performance Analysis
EF6 Mass Load limits	Nitrogen limits exceeded this FY Phosphorus limits exceeded this FY	See section 54.4 Discharge compliance with permit limits and Performance Analysis
EF7 Effluent Improvement Plan	Effluent Improvement Plan overdue.	Plan submitted. Reuse volumes have been impacted during the reporting year due to the UV upgrade project. TasWater continues to update EPA on plan progression.

54.11 Complaints and incident reporting

No complaints recorded in the period.

Table 54-M: Incident reporting

Date	Category	Details	Mitigation actions
21/01/2025	Mechanical	An interruption to disinfection, resulting in approximately 670kL of partially treated effluent being discharged to the Derwent River without complete disinfection.	Manual control until issue was rectified and effluent being fully disinfected
18/11/2024	Process Upset	No Total or Free chlorine residue due to the chlorine being consumed which is due to a process upset and poor-quality effluent	Operations identified high H ₂ S levels and increased MHL dosing to address issue.

54.12 Any other relevant information

Table 54-N: Projects or significant operational events that occurred in FY 2024-25:

Project or significant operational event	Progress
Derwent Hobart Sewerage Regional Master Plan	The Derwent Hobart Sewerage Regional Master Plan has been completed and outlines both short- and long-term considerations for the Rosny STP.
Capital upgrade, replacing the existing chlorine system, with a UV disinfection system.	Completion date currently set at September 2025.
Clarifier 4 Reline	Completed
Erosion Repairs & Stormwater Management Project	Completed

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

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