

48. Richmond STP

48.1 Activity and report details

Activity name	Richmond STP		
Activity address	Commercial Road, Richmond		
Permit number	9698	Date of issue	--
EPN	7371/1	Date of issue	7/09/2017
Treatment level	Secondary Treatment		
Authorised dry weather flows	236 kL/day		
Key influent source	Residential		
Contact person	Kate Westgate		
Report author	George Fitzgibbon		
Contact details	Environment@taswater.com.au		
Date of submission	30 September 2025		

Figure 48-1: Richmond Sewage Treatment Plant



48.2 Monitoring and compliance summary

48.2.1 Flow data

Table 48-A: Flow monitoring summary

	Influent	Effluent	Reuse
Location name	Inlet	N/A	Effluent Reuse Scheme - Ag Irrigation
Coordinates	E 535792 N 5267404	N/A	E 535987 N 5267403
Method of measurement	In line meter	N/A	In line meter
Date of last calibration/validation (if applicable)	23/06/2025	N/A	23/06/2025

Table 48-B: Annual flow and rainfall data

Month	Average Daily Influent Volume (kL/day)	Rainfall (mm/month) BOM Station ID 94212	Discharge to Waters Total Effluent Volume (ML)	Discharge to Reuse Total Effluent Volume (ML)
July 2024	278	81.2	0.00	8.62
August 2024	218	71.2	0.00	6.75
September 2024	205	49.4	0.00	6.16
October 2024	129	30.4	0.00	3.99
November 2024	109	21.8	0.00	3.28
December 2024	195	122.8	0.00	6.04
January 2025	196	17	0.00	3.03
February 2025	122	29.6	0.00	3.42
March 2025	136	7.4	0.00	4.20
April 2025	194	39.2	0.00	4.98
May 2025	202	44.2	0.00	5.96
June 2025	199	40.2	0.00	5.97
Annual 2024-25	182	554.4	0.00	62.40
% of Total Discharge	--	--	0.0%	100.0%

Note: Richmond STP does not have an outfall to a waterway, this is a full reuse site

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

48.3 Bypass events

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

48.4 Discharge compliance with permit limits

There are no set limits for effluent discharge for this STP as there is no discharge to waterways. See reuse performance below.

48.5 Reuse annual reporting

The Rokeby, Rosny, Cambridge and Richmond STP's supply recycled water for irrigation purposes to the Clarence recycled water scheme. 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 48-C: Reuse compliance summary

Parameter	BOD ₅	pH	E. coli
Permit/EPN limit	mg/L	Units	MPN/100ml
Maximum	50	9.0	10,000
90th percentile	--	--	--
50th Percentile	--	--	1,000
Minimum	--	5.5	--
Samples analysed			
Number required	12	12	12
Number analysed	12	12	12
Statistical summary			
Max	54.0	9.0	6,294
90th percentile	35.5	8.5	799
50th percentile	11.5	7.8	31
Min	5.0	6.8	10
Summary of results			
% compliance with Maximum	92%	--	100%
% compliance with 90th percentile	--	--	--
% compliance with 50th percentile	--	--	92%
% compliance with pH range	--	100%	--

Table 48-D: Performance analysis (discharge to reuse)

Reuse compliance parameter	Date(s) of non-compliance	Reasons for non-compliance	Actions to improve performance
BOD	16/06/2025 20/03/2025 24/02/2025 16/10/2024 19/09/2024 19/09/2024	This BOD non-compliance coincides with high algae levels suggesting algae to be the root cause.	No specific actions undertaken. Desludging of lagoon 1 was completed in August 2024. Lagoon 2 is likely to require desludging within the next 5 years.

No other parameters have had exceedances in reporting period.

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 was 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 48-E: 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.

48.6 Ambient monitoring program

Ambient monitoring is not required for this site as it does not discharge to waterways.

48.7 Groundwater monitoring

Site Status: Green

Richmond STP groundwater monitoring network consists of three (3) groundwater monitoring bores ID numbers CC-LLGW5 – 7. Bore ID’s CC-LLGW5 and 6 situated east and south of the STP respectively are considered downgradient and to target potential seepage from the STP lagoons. Bore ID CC-LLGW7 is located west of STP Primary Pond and considered a background bore.

6-monthly at the extended analytical suite was completed across the network in August 2024 with annual sampling in March 2025 as scheduled.

The 2024-25 groundwater monitoring event recorded elevated concentrations of one key analyte (total phosphorous) above an adopted guideline criterion across the monitoring network, including the background bore (ID CC-LLGW7). This continues to suggest (as noted in 2023-2024 report) that these occurrences are likely natural, and there is minimal evidence to suggest leakage from the STP is impacting groundwater.

6-monthly sampling is scheduled to continue in the 2025-26 groundwater monitoring program with analytical suite changed to the standard suite.

48.8 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 106 out of 108 in priority (high).

48.9 Sludge and biosolids

The latest revision to the Sewage Sludge Management Plan (SSMP) includes full details of the actions undertaken during the reporting period, the most recent sludge profiling results, and upcoming annual desludging program. This STP was assessed as compliant with the 2024-25 SSMP.

Sludge at this STP is captured within the three treatment lagoons, which will be periodically desludged as required.

Table 48-F: Desludging status and comments

Desludging status	Comments
High Priority	Desludging of lagoon 1 was completed in August 2024. Lagoon 2 is likely to require desludging within the next 5 years.

Table 48-G: Stockpile comments

Stockpile onsite	Volume of stockpile
Sludge from Lagoon 1 contained in 3 Geobags onsite	Currently 3 Geobags stored onsite in temporary laydown area. Approximate sludge volume is 680m3 (Total Solids 23.7%). Once suitably dried, sludge will be tested, classified and applied to suitable farmland for beneficial reuse – providing biosolid Class 2 requirements are met.

48.10 Non-compliance with other permit requirements

Table 48-H: EPN non-compliances

EPN condition	Description of non-conformance	Future actions to be taken
EF2 Effluent quality limits for discharge to a reuse scheme	Reuse compliance limits	See section 48.5 Reuse Annual Reporting and Performance Analysis
Annual Environmental Review	Found to be non-compliant for FY23/24	A comprehensive review across all STPs will be undertaken to ensure future AERs provide a more complete account of compliance performance

48.11 Complaints and incident reporting

Table 48-I: Complaints

Date	Category	Details	Mitigation actions
14/03/2025	Odour	Strong sewer odour from the sewer ponds	Crews have inspected. Checked surrounding manholes and spoke to neighbouring residents. Checked pump station and investigated down at the settling ponds and no odour was detected there.

No incidents reported in the period.

48.12 Any other relevant information

Table 48-J: 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 Richmond STP.

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

www.taswater.com.au