70.Triabunna STP

70.1 Activity and report details

Activity name	**Triabunna STP**		
Activity address	Freestone Point Rd, Triabunna		
Permit number	6236	**Date of issue**	27/08/2002
EPN	8554/1	**Date of issue**	29/05/2019
Treatment level	Secondary Treatment		
Authorised dry weather flows	253 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 70-1: Triabunna Sewage Treatment Plant

70.2 Monitoring and compliance summary

70.2.1 Flow data

Table 70-A: Flow monitoring summary

	Influent	Effluent	Reuse
Location name	Sewer Inlet	Vicary's Inlet	Rostrevor property
Coordinates	E 575926 N 5293809	E 575650 N 5293875	E 575945 N 5294098
Method of measurement	In Line meter	In Line meter	In Line meter (on Customer)
Date of last calibration/validation (if applicable)	24/02/2025	14/03/2022	14/03/2022

Table 70-B: Annual flow and rainfall data

Month	Average daily influent volume (kL/day)	Rainfall (mm/month) BOM Station ID 91001	Discharge to waters total effluent volume (ML)	Discharge to reuse total effluent volume (ML)
July 2024	251	72.4	0.00	7.77
August 2024	192	28.4	0.00	5.94
September 2024	196	0	0.00	5.88
October 2024	163	23	0.00	5.06
November 2024	169	30.8	0.00	5.06
December 2024	221	89	6.86	0.00
January 2025	162	13.6	5.02	0.00
February 2025	178	57.6	4.98	0.00
March 2025	147	19.6	4.57	0.00
April 2025	121	28.8	0.00	3.63
May 2025	142	28.6	0.00	4.40
June 2025	147	76.8	0.00	4.40
Annual 2024-25	174	468.8	21.42	42.14
% of total discharge	--	--	33.7%	66.3%

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

70.3 Bypass events

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

70.4 Discharge compliance with permit limits

Table 70-C: Compliance summary

Parameter	Ammonia	BOD_5	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	21	50	--	32	2	8.5	10	1,500	50
90th percentile	--	--	--	--	--	--	--	--	--
50th percentile	--	--	--	--	--	--	--	--	--
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									
Maximum	33.8	91.0	0.0	44.0	1.2	8.5	11.3	1,483.0	160.0
90th percentile	32.2	54.1	0.0	40.9	1.0	8.5	10.7	1,032.3	102.5
50th percentile	17.1	31.0	0.0	23.5	1.0	8.0	7.9	180	45.5
Minimum	0.4	6.0	0.0	7.5	1.0	7.4	6.6	20	4.0
EPN limit compliance									
% compliance with maximum	67%	83%	--	58%	100%	92%	83%	100%	50%
% compliance with 90th percentile	--	--	--	--	--	--	--	--	--
% compliance with 50th percentile	--	--	--	--	--	--	--	--	--
% compliance with pH range	--	--	--	--	--	92%	--	--	--

Table 70-D: Mass loads to the environment

Mass Loads	EPN limit	Frequency	2024-25 result
Nitrogen (kg)	--	Annual	372.2
Phosphorous (kg)	--	Annual	190.6
Method	Time weighted/grab sample method		

Table 70-E: Performance analysis (discharge to environment)

Effluent compliance parameter	Date(s) of non-compliance		Reasons for non-compliance	Actions to improve performance
Ammonia	25/07/2024 26/08/2024	19/09/2024 28/10/2024	Lagoons have lower Ammonia and Nitrogen removal rates at lower temperatures.	No specific actions.
Nitrogen	25/07/2024 26/08/2024 19/09/2024	28/10/2024 18/11/2024		
pH	12/12/2024		Algae is believed to be the primary reason for elevated pH and TSS. Algae is a source of oxygen and is fundamental to lagoon treatment.	No specific actions
TSS	28/10/2024 18/11/2024 23/01/2025	17/02/2025 7/04/2025		
Phosphorus	23/01/2025 20/03/2025		Non-compliant phosphorus could be attributed to algal decomposition.	

No other parameters have had exceedances in reporting period.

70.5 Reuse annual reporting

The Triabunna STP supplies recycled water for irrigation purposes to the Triabunna recycled water scheme (RWS) at the Rostrevor property.

Table 70-F: Reuse compliance summary

	BOD5	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			
Maximum	91.0	8.5	1,483
90th percentile	54.1	8.5	1,032
50th percentile	31.0	8.0	180
Minimum	6.0	7.4	20
EPN Limit Compliance			
% compliance with Maximum	83%	--	100%
% compliance with 90th percentile	--	--	--
% compliance with 50th percentile	--	--	83%
% compliance with pH range	--	100%	--

Table 70-G: Performance analysis (discharge to reuse)

Reuse compliance parameter	Date(s) of non-compliance	Reasons for non-compliance	Actions to improve performance
BOD	8/02/2024 4/03/2024	Algae is believed to be the primary reason for occasional elevated pH and BOD. Algae is a source of oxygen and is fundamental to lagoon treatment.	No Specific Actions

Annual soil sampling was completed at two long term monitoring sites (Site 1 and Site 2) at the RWS in November 2024. The field component of the annual compliance audit was completed in conjunction with the soil sampling with a follow up phone call in January 2025. A summary of the findings of the programs is provided in the below table.

Table 70-H: Annual recycled water scheme compliance audit and soil monitoring summary

Program	Compliance audit	Soil monitoring
Compliance status	Minor non-compliance Inadequate signage	Soil salinity and sodicity increased at both sites but remained within historical range. Recycled water quality data suggests a slight to moderate risk of soil permeability loss from recycled water irrigation. Phosphorous levels remain excessive and are attributed to fertiliser application not recycled water irrigation.
Comments	Audit noted that irrigation can (not common) extend over a section of a drain near southern property boundary. Management plan does allow for irrigation in this area but states a 10m buffer distance. Although practice not in accordance with current plan it is considered a low environmental risk as irrigation only occurs when drainage dry.	

RWS Groundwater Status: Green

Triabunna RWS groundwater monitoring network consists of two monitoring bores, ID's TRBGW4 and TRBGW5. Bore ID TRBGW5 is in the southwest of the irrigation area and before the ephemeral creek that drains into Vicary's Rivulet estuary. Bore ID TRBGW4 is located southeast of the irrigation area and considered upgradient.

6-Monthly sampling at the extended analytical suite was completed at bore ID TRBGW5 in October 2024 and March 2025 as scheduled. Annual sampling completed at the extended analytical suite at bore ID TRBGW4 in March 2024 as scheduled.

No evidence of impact of groundwater quality recorded during the 2024-25 monitoring event. All analytes were recorded below the adopted guideline criteria with the exception of one analyte (Nitrate N) at bore ID TRBGW4, which remains within previously recorded ranges.

6-Monthly sampling of extended analytical suite is scheduled to continue at TRBGW5, with annual sampling at the standard analytical suite scheduled to continue at bore ID TRBGW4 during the 2025-26 monitoring program.

70.6 Ambient monitoring program

Table 70-I: Program details

Program	Seasonal ambient monitoring as required under EPA permit variation 18/01/2024
Status	Ambient monitoring completed within the reporting period.
Update	Discharge to the environment did not occur during the normal seasonal discharge monitoring timeframe (July – December and again in May and June) except for December.
Comments	Ambient water quality monitoring occurred in Vicarys Rivulet receiving environment during July to December 2024 and again in May and June 2025. Due to issues with the reuse pump there was discharge to the environment over the summer period (December – March). The December monitoring was the only time a discharge event was captured. Key findings from the ambient water quality data review were: • The toxicant Default Guideline Value (tDGV) for ammonia was not exceeded at either the upstream or downstream sample site. • Upstream total nitrogen was higher than downstream on every sampling occasion. • Nitrate levels were below the DGVs at the downstream site. Upstream results were consistently higher than downstream. • Total phosphorous levels were consistently higher at the upstream site. • Upstream enterococci results were always higher than downstream. The downstream site was always below the DGV for primary contact recreation. Consistent with previous years, the water quality downstream of the outfall is consistently better than upstream.

70.7 Groundwater monitoring

Site status: Amber

Triabunna STP's groundwater monitoring network consists of seven monitoring bores, ID's TRBGW1-3 and TRGBW5-7). Monitoring bore (ID TRBGW5) is located to the south and is also associated with the RWS.

6-Monthly sampling at the extended analytical suite was completed across the network in October 2024 and March 2025 as scheduled.

The 2024-25 groundwater monitoring event identify potential impacts from STP at bore ID's TRGW1 and TRGW2 through continued elevated concentrations of total phosphorous.

6-Monthly sampling at the extended analytical suite is scheduled to continue across the monitoring network during the 2025-26 groundwater monitoring program.

70.8 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 1 out of 110 in priority. Works this period included defect rectification within the sewer network.

70.9 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. No stockpiling occurs at this site.

Table 70-J: Desludging status and comments

Desludging status	Comments
Medium Priority	Lagoon 1 is likely to require desludging within next 5 to 10 years.

70.10 Non-compliance with other permit requirements

Table 70-K: EPN non-compliances

EPN condition	Description of non-conformance	Future actions to be taken
EF2 Effluent quality limits for discharge to Vicarys Inlet	Discharge compliance with permit limits.	See section 70.4 Discharge compliance with permit limits and Performance Analysis.
EF3 Effluent quality limits for discharge to a reuse scheme	Discharge compliance with reuse permit limits.	See section 70.5 Reuse Annual Reporting and Performance Analysis.
M4 Flow meters	No recent flow meter validations.	Scheduled for rectification

70.11 Complaints and incident reporting

There were no incidents recorded during the reporting period.

Table 70-L: Complaints reporting

Date	Category	Details	Mitigation actions
27/09/2024	Blue Green Algae	EPA received a complaint about BGA in Vicarys Rivulet	Further investigation did not identify high levels of BGA in the treatment lagoon. Unlikely to have been caused by effluent discharge. Ambient monitoring undertaken on 19/09/24 upstream and downstream of the STP effluent discharge into Vicarys Rivulet did not report any toxic BGA.

70.12 Any other relevant information

Table 70-M: Projects or significant operational events that occurred in FY 2024-25

Project or significant operational event	Progress
East Coast Sewerage Regional Master Plan	The East Coast Sewerage Regional Master Plan has been completed and includes the short term and long-term considerations for the Triabunna STP.

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

www.taswater.com.au