

24 Geeveston STP

24.1 Activity and report details

Activity name	Geeveston STP		
Activity address	Huon Highway, Geeveston		
Permit number	Licence to Operate – 3625	Date of issue	8/12/1992
EPN	8536/1	Date of issue	31/01/2013
Treatment level	Secondary Treatment		
Authorised Dry Weather Flows	300 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 2023		

Figure 24-1: Geeveston Sewage Treatment Plant



24.2 Monitoring and compliance summary

24.2.1 Flow data

Table 24-A: Flow monitoring summary

	Influent	Effluent	Reuse
Location Name	Inlet	Kermandie River	No reuse scheme
Coordinates	E 494803 N 5220964	E 494804 N 5221009	NA
Method of Measurement	Level Sensor	Level Sensor	NA
Date of last Calibration/Validation (if applicable).	6/08/2022	6/08/2022	NA

Table 24-B: Annual flow and rainfall data

Month	Average Daily Influent Volume (kL/day)	Rainfall (mm/month) BOM Station ID 94268	Discharge to Waters Total Effluent Volume (ML)	Discharge to Reuse Total Effluent Volume (ML)
July 2022	401	55.8	12.97	--
August 2022	865	177.6	26.40	--
September 2022	440	61.0	14.04	--
October 2022	352	97.2	15.34	--
November 2022	382	86.4	11.10	--
December 2022	239	49.0	9.77	--
January 2023	187	15.0	7.24	--
February 2023	267	65.4	11.69	--
March 2023	267	60.4	8.83	--
April 2023	244	42.8	6.73	--
May 2023	316	87.8	8.21	--
June 2023	452	128.6	13.57	--
Annual 2022-23	368	927.0	145.88	0.00
% of Total Discharge	--	--	100.0%	0.0%

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

24.2.2 Bypass events

Table 24-C : Bypass events summary

Bypass ID:	GEEST01-ON					
Bypass description:	Inlet pump station overflow to outfall					
Treatment bypassed:	Secondary Treatment, Disinfection (Chlorine)					
Treatment level of impacted effluent:	Screened					
Flows exceeding:	19 L/s (Approximate)					
Discharge location:	Kermandie River: 494804.63E, 5221009.4N (GDA94)					
Start date / time	End date / time	Duration	Volume estimate	Cause	Response actions	
14/08/22 04:28	16/08/22 01:32	45.1 h	2146 kL		14/08/22 04:28	16/08/22 01:32
22/08/22 06:21	22/08/22 09:21	3.0 h	112 kL		22/08/22 06:21	22/08/22 09:21
27/10/22 22:49	28/10/22 14:52	16.1 h	1081 kL		27/10/22 22:49	28/10/22 14:52
13/12/22 17:28	13/12/22 18:38	1.2 h	46 kL		13/12/22 17:28	13/12/22 18:38
26/02/23 03:37	26/02/23 03:47	0.2 h	1 kL		26/02/23 03:37	26/02/23 03:47

24.3 Discharge compliance with permit limits

Table 24-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	19	15	1.0	24	10	8.5	5.5	200	25
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	13	12	12	12
Statistical summary									
Max	8.0	22	1.64	20.2	1.0	7.8	7.0	24196	30.0
90th percentile	6.7	16	1.52	14.2	1.0	7.7	2.8	2073	12.2
50th percentile	3.4	6	0.94	12.1	1.0	7.4	1.3	10	9.7
Min	0.1	5	0.12	8.6	1.0	6.8	0.5	10	4.0
EPN Limit Compliance									
% compliance with Maximum	100%	83%	67%	100%	100%	--	92%	83%	92%
% compliance with 90th percentile	--	--	--	--	--	--	--	--	--
% compliance with 50th percentile	--	--	--	--	--	--	--	--	--
% compliance with pH range	--	--	--	--	--	100%	--	--	--

Table 24-E: Mass loads to the environment

Parameter	EPN Limit	Frequency	2022-23 result
Nitrogen (kg)	--	Annual	1752.1
Phosphorous (kg)	--	Annual	233.6
Method	Flow weighted/Composite method		

Table 24-F: Performance Analysis (Discharge to environment)

Effluent compliance parameter	Date(s) of non-compliance	Reasons for non-compliance	Actions to improve performance
E. coli	14/09/2022 27/10/2022	Wet weather event caused elevated flows and reduced disinfection efficacy.	Minor mechanical reliability improvements to the chlorine dosing system.
Chlorine	10/08/2022 24/11/2022 19/01/2023 07/03/2023	Instances of elevated chlorine typically are a result of the limited automated chlorine control. The variability in effluent quality from the secondary treatment process is also believed to impact the consistency disinfection performance.	
Phosphorus	23/02/2023	The process is not specifically designed to remove phosphorus. Instances of elevated TSS and BOD occurred during wet weather events. High flows cause solids carry over from the solids separation leading to TSS and BOD exceedances.	No improvement actions taken.
TSS	24/11/2022	Instances of elevated TSS and BOD occurred during wet weather events. High flows cause solids carry over from the solids separation leading to TSS and BOD exceedances.	No improvement actions taken.
BOD	27/10/2022 24/11/2022		

No other parameters had exceedances in the reporting period.

24.4 Reuse Annual Reporting

No recycled water scheme associated with this STP.

24.5 Ambient monitoring program

Table 24-G: Program details

Program	Not applicable
Status	No ambient monitoring undertaken during reporting period.
Update	Not applicable
Comments	Geeveston Outfall Relocation Project currently on hold while alternative outfall locations are assessed. A post new outfall commissioning ambient monitoring plan will be implemented upon project completion.

24.6 Groundwater monitoring

No groundwater monitoring bores associated with this STP.

24.7 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 9 out of 79 in priority (high).

24.8 Sludge and Biosolids

There are no sludge/biosolids dewatering facilities at this site, with sludge transferred via liquid sludge transport to Ranelagh STP. 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 fully compliant with the 2022-23 SSMP.

No stockpiling occurs at this site.

24.9 Non-compliance with other permit requirements

Table 24-H: EPN non-compliances

EPN Condition	Description of non-conformance	Future Actions to be taken
EF3 Effluent discharge limits to Kermadie River	Discharge compliance with permit limits	See section 24.3 Discharge compliance with permit limits and Performance Analysis.
EM4 Discharge Management Plan	Discharge Management Plan overdue	Submission timeframe TBC. Plan in development for DMP submission dates following on from agreed format between TasWater and EPA.

EPN Condition	Description of non-conformance	Future Actions to be taken
OP1 Operational Procedures Manual	No contemporary Operational Procedures Manual	New SharePoint based solution for OPMMs currently being developed. First version to be implemented by FY2024.
G7 Bypass Report	Not submitted	EPA have indicated that commissioning of the new Geeveston STP outfall, and the flows it will pass, will be sufficient to address this non-compliance.

24.10 Complaints and incident reporting

No complaints received during 2022-23 reporting period.

Table 24-I: Incident Reporting

Date	Category	Details	Mitigation actions
23/09/2022	Process issue	Operators detected low chlorine when analysing trends. Upon further inspection, it was determined there were no issues with the chlorine dosing system. No air locks were observed and the system has automatic de-gassers installed.	Reporting requirements have been clarified and SD have requested OC call out the operator on-call when chlorine level drops below 0.30ppm for a sustained period (longer than 30 mins)

24.11 Any other relevant information

Table 24-J: Projects or significant operational events that occurred in FY 2022-23:

Project or significant operational event	Progress
Geeveston Outfall Relocation Project	Project on hold. EPA and Huon Valley Council approval received for DA and PCE issued for Shipwrights Point outfall option. Alternative outfalls being assessed given community concern of the current approved location.

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

www.taswater.com.au