65. Stanley STP

65.1 Activity and report details

Activity name	Stanley STP		
Activity address	Green Hills Rd, Stanley		
Permit number	Licence to Operate - 3303	**Date of issue**	17/11/1986
EPN	9193/1	**Date of issue**	19/05/2015
Treatment level	Secondary Treatment		
Authorised dry weather flows	276 kL/day		
Key influent source	Residential		
Contact person	Kate Westgate (Manager Environmental Performance)		
Report author	Jake Crisp (Environmental Scientist)		
Contact details	Environment@taswater.com.au		
Date of submission	30 September 2025		

Figure 65-1: Stanley Sewage Treatment Plant

65.2 Monitoring and compliance summary

65.2.1 Flow data

Table 65-A: Flow monitoring summary

	Influent	Effluent	Reuse
Location name	Plant Influent	Bass Strait	No reuse scheme
Coordinates	E 355916 N 5487049	E 356263 N 5487655	NA
Method of measurement	In line meter	Estimate based on influent	NA
Date of last calibration/validation (if applicable).	27/05/2025	NA – meter to be installed	NA

Table 65-B: Annual flow and rainfall data

Month	Average daily influent volume (kL/day)	Rainfall (mm/month) BOM Station ID 91034	Discharge to waters total effluent volume (ML)	Discharge to reuse total effluent volume (ML)
July 2024	158	120.8	4.88	--
August 2024	213	225	6.61	--
September 2024	131	206.2	3.92	--
October 2024	166	84	5.14	--
November 2024	158	89.4	4.73	--
December 2024	231	81.6	7.16	--
January 2025	202	51.4	6.28	--
February 2025	193	19.4	5.39	--
March 2025	183	25.4	5.66	--
April 2025	176	34.2	5.28	--
May 2025	170	69	5.26	--
June 2025	154	--	4.63	--
Annual 2024-25	178	1006.4	64.94	0.00
% of total discharge	--	--	100.0%	0.0%

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

65.3 Bypass events

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

65.4 Discharge compliance with permit limits

Table 65-C: 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	22	50	--	35	10	9.0	10	1000	--
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	13.2	139.0	0.0	24.4	7.0	10.0	11.0	6131.0	132.0
90th percentile	9.5	128.3	0.0	24.4	3.1	9.5	9.7	3799.2	117.1
50th percentile	3.8	91.5	0.0	19.4	2.0	8.8	7.8	1103.5	89.5
Minimum	0.2	40.0	0.0	16.1	1.0	7.6	4.7	159.0	25.0
EPN limit compliance									
% compliance with maximum	100%	8%	--	100%	100%	75%	92%	50%	--
% compliance with 90th percentile	--	--	--	--	--	--	--	--	--
% compliance with 50th percentile	--	--	--	--	--	--	--	--	--
% compliance with pH range	--	--	--	--	--	75%	--	--	--

Table 65-D: Mass loads to the environment

Mass Loads	EPN limit	Frequency	2024-25 result
Nitrogen (kg)	--	Annual	1285.8
Phosphorous (kg)	--	Annual	506.0
Method	Time weighted/grab sample method		

Table 65-E: Performance analysis (discharge to environment)

Effluent compliance parameter	Date(s) of non-compliance			Reasons for non-compliance	Actions to improve performance
BOD	16/07/2024 17/09/2024 22/10/2024 12/11/2024	10/12/2024 21/01/2025 18/02/2025 18/03/2025	29/04/2025 20/05/2025 3/06/2025	Elevated levels of algae are considered the main contributor to increased pH and BOD. Through photosynthesis, algae absorb carbon dioxide and produce oxygen, which can influence pH levels in the effluent. As the algal biomass accumulates and decomposes, it adds to the organic load, leading to elevated BOD.	TasWater continues to explore several potential upgrade options, pending further internal investigations and feasibility discussions.
pH	17/09/2024 12/11/2024 10/12/2024				
E. coli	16/07/2024 18/02/2025 18/03/2025 29/04/2025	20/05/2025 3/06/2025	3/06/2025	Low lagoon retention time together with poor chlorine dose control are likely contributing to the *E. coli* exceedances.	
Phosphorus	29/04/2025			Algal decomposition is a plausible source of the elevated phosphorus level, as phosphorus is released when algal cells break down.	

No other parameters had exceedances in the reporting period.

65.5 Reuse annual reporting

No Recycled Water Scheme associated with this STP.

65.6 Ambient monitoring program

Table 65-F: Program details

Program	**Stanley STP Ambient Monitoring Plan (AMP)**
Status	Biennial, seasonal ambient water quality and biological monitoring within the Bass Strait receiving environment.
Update	Seasonal (winter and summer) water quality monitoring, and intertidal and benthic habitat biological surveys were completed during the reporting period.
Comments	Seasonal winter (August 2024) and summer (December 2024) water quality monitoring, and intertidal and benthic habitat biological surveys were completed during the reporting period to understand the risks associated with the STP effluent discharges into the Bass Strait receiving environment. An Ambient Monitoring Report (AMR) detailing the results of ambient water quality monitoring has been provided to the EPA. The summarised findings of the AMR were: • STP effluent discharges had minimal impact on field-measured parameters including temperature, salinity, dissolved oxygen and pH. • There were exceedances of the relevant DGVs for nutrients including total nitrogen, nitrate and total phosphorus, however, the results did not exhibit distinct spatial patterns in relation to the proximity of the outfall discharge. For total phosphorus, the reference site showed comparable concentrations indicating variation in the environment not attributable to the STP effluent discharge. • Pathogen indicator (enterococci and *E. coli*) concentrations in the ambient environment were comparable to previous ambient monitoring with values below the EPA low-risk guideline values for waters with current or potential recreational use. • Total suspended solid (TSS) concentrations exceeded the relevant DGV at multiple sites but did not appear spatially linked to the STP effluent discharge with reference sites showing similar values. • There were no exceedances of water quality DGVs observed further than 200 m of the monitoring sites, suggesting rapid dissipation of nutrients and algae. There is low risk of nutrient enrichment around the Stanley STP outfall, likely due to the energetic receiving environment with regular flushing, mixing and subsequent dilution of the effluent discharge. • The benthic habitat consists of rocky shelfs in the subtidal zone which has recruited a diverse assemblage of algae, dominated by brown and green algae species with some filamentous and encrusting red species also present. The substrate east of the outfall consists of mobile, coarse sand with no evidence of high nutrient sedimentation. Distribution of species within the subtidal benthic habitat did not exhibit spatial patterns related to the proximity of the outfall and STP effluent discharge. Additionally, there was no evidence of a deterioration of the receiving environment when compared to the previous ambient monitoring. • Intertidal assemblages were dominated by brown algae and frondose red algae. Encrusting tube worms were present across most quadrats analysed, with barnacles also prevalent across the intertidal zone. The outfall quadrat displayed the greatest total percentage coverage consisting of algae and encrusting tube worms compared to the other sites, potentially due to nutrient release from the STP effluent discharges. Green algae were most prevalent at the outfall and nearby sites, up to 100 m North of the outfall which also may be a potential indicator of nutrient enrichment. However, there did not seem to be further evidence, such as the presence of filamentous green algae, to suspect that other sites are impacted by the effluent discharge as the percentage coverage of intertidal categories remained relatively consistent over all sites. Habitat characterisation in the subtidal and intertidal zones maintained ecological

	stability in the immediate vicinity of the outfall, with no notable changes observed over present and past monitoring programs. Overall, ambient water quality and biological monitoring has determined that the Stanley STP effluent discharge poses a low risk to Protected Environmental Values (PEVs) which is consistent with the findings of prior ambient monitoring.

65.7 Groundwater monitoring

Site status: Amber (2023-24)

Stanley STP groundwater monitoring network consists of five monitoring bores, ID numbers SYGW2, SYGW3 and STGW5-7, which are all located on the eastern boundary of the STP between the coastline and STP.

Bi-annual sampling was completed at bore ID's SYGW2 and SYGW3-6 in December 2024 and May 2025 as scheduled. One round of sampling was completed at bore ID SYGW3 and SYGW7 in May 2025 (annual), and December 2024 (6-monthly) respectively. One round of sampling was completed at STP Lagoons 1 and 2 in December 2024 as scheduled. No sampling was completed at the STP Sludge Bund.

The 2024-25 groundwater monitoring event report is due in September 2025. Any actions required following a review of the report will be provided by 21 January 2026 in the groundwater Summary Actions Report (SAR).

Bi-annual sampling at the extended analytical suite is scheduled to continue at all bores for the 2025-26 groundwater monitoring program. Surface water samples of the STP lagoons is also scheduled to increase to a bi-annual frequency.

65.8 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 65 out of 108 in priority.

65.9 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 two treatment lagoons, which will be periodically desludged as required. No stockpiling occurs at this site.

Table 65-G: Desludging status and comments

Desludging status	
High Priority	Desludging of lagoons 1 and 2 are scheduled to occur in 2026-27, as per the current prioritisation planning schedule.

65.10 Non-compliance with other permit requirements

Table 65-H: EPN non-compliances

EPN condition	Description of non-conformance	Future actions to be taken
EF2 Effluent quality limits for discharge to water	Discharge compliance with permit limits.	See section 65E Discharge compliance with permit limits and Performance Analysis.
EM2 Wastewater Reuse EMP Review	No evidence of Wastewater Reuse EMP review submission to EPA.	Desktop RFS study completed in 2021 and has been reviewed. No Reuse EMP action planned until Strategic Business Case (SBC) decided for Stanley STP.
EM3 Discharge Management Plan & EM1 Effluent Management	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.
EF4 WWTP Improvement Works	Inlet screening and aeration equipment installed by 30 November 2016.	Upgrade options currently being investigated as part of SBC.
EF3 Installation and Commissioning of Disinfection Equipment and Bacteriological and Chlorine Effluent Quality Limits.	No ambient monitoring plan provided by 30 June 2016. No implementation plan for the installation and commissioning of effluent disinfection by 1 December 2026.	Ambient monitoring plan submitted to EPA in 2021 with low risk identified to recreational activities in Stanley. Upgrade options being investigated as part of SBC.

65.11 Complaints and incident reporting

Table 65-I: Complaints reporting

Date	Category	Details	Mitigation actions
17/02/2025 29/01/2025 30/01/2025 31/01/2025 05/12/2024	Odour	Strong odour emanating from lagoons.	TasWater uses a diesel generator to power an aerator for three to four summer months. Complaints arose before the aerator was started, likely due to warm conditions and low DO causing increased odours. The aerator was activated following these complaints, and no further issues were reported.

65.12 Any other relevant information

Table 65-J: Projects or significant operational events that occurred in FY 2024-2025:

Project or significant operational event	Progress
North West Sewerage Master Plan	The North West Sewerage Regional Master Plan has been completed and outlines both short- and long-term considerations for the Stanley STP.

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

www.taswater.com.au