

## 2. Beauty Point STP

### 2.1 Activity and report details

Activity name	Beauty Point STP		
Activity address	West Arm. Ilfraville		
Permit number	Licence to Operate - 3596	Date of issue	15/12/1988
EPN	497/2	Date of issue	06/05/2024
Treatment level	Secondary Treatment		
Authorised dry weather flows	540 kL/day		
Key influent source	Residential		
Contact person	Kate Westgate		
Report author	Luisa Romero (Environmental Scientist)		
Contact details	Environment@taswater.com.au		
Date of submission	30 September 2025		

**Figure 2-1: Beauty Point Sewage Treatment Plant**



## 2.2. Monitoring and compliance summary

### 2.2.1. Flow data

**Table 2-A: Flow monitoring summary**

	Influent	Effluent	Reuse
Location name	Inlet	West Arm. Tamar Estuary	Ag Irrigation (Gypsy Hill)
Coordinates	E 483591 N 5444818	E 483408 N 5445101	E 483346 N 5444846
Method of measurement	In line meter	Estimate based on reuse	In line meter
Date of last calibration/validation (if applicable).	31/10/2024	NA	31/10/2024

**Table 2-B: Annual flow and rainfall data**

Month	Average daily influent volume (kL/day)	Rainfall (mm/month) BOM station ID 91262	Discharge to waters total effluent volume (ML)	Discharge to reuse total effluent volume (ML)
July 2024	865	131.4	12.10	14.70
August 2024	851	94.8	26.38	0.00
September 2024	932	101.8	27.96	0.00
October 2024	602	72.7	18.65	0.00
November 2024	652	122.2	19.57	0.00
December 2024	628	78.4	19.47	0.00
January 2025	349	4.6	10.81	0.00
February 2025	323	10	5.48	4.17
March 2025	188	14.6	0.00	5.84
April 2025	354	24	0.00	10.63
May 2025	354	49.5	4.61	6.35
June 2025	468	88.6	14.05	0.00
Annual 2024-25	548	792.6	159.08	41.68
% of total discharge	--	--	79.2%	20.8%

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

### 2.3. Bypass events

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

## 2.4. Discharge compliance with permit limits

**Table 2-C: Compliance summary**

	Ammonia as N	BOD5	Chlorine	Nitrogen	Oil and Grease	pH	Phosphorus	E coli	Enterococci	Total suspended solids
Permit/EPN limit	mg/L	mg/L	mg/L	mg/L	mg/L	Units	mg/L	MPN/100mL	MPN/100mL	mg/L
Maximum	20	40	--	20	5	8.5	8	1000	1000	50
90th Percentile	--	--	--	--	--	--	--	--	--	--
50th Percentile	--	--	--	--	--	--	--	--	--	--
Minimum	--	--	--	--	--	6.5	--	--	--	--
<b>Samples analysed</b>										
Number required	12	12	--	12	12	12	12	12	12	12
Number analysed	12	12	0	12	12	12	12	12	12	12
<b>Statistical summary</b>										
Maximum	21.5	57.0	0.0	28.8	2.0	9.1	9.8	3654.0	24196.0	94.0
90th percentile	20.3	49.7	0.0	27.9	1.7	8.1	8.0	1017.3	9474.9	79.5
50th percentile	9.0	14.5	0.0	19.5	1.0	7.6	4.6	167.5	165.5	20.9
Minimum	0.3	5.0	0.0	4.0	1.0	6.8	2.3	10.0	10.0	4.0
<b>EPN Limit Compliance</b>										
% compliance with Maximum	83%	83%	--	50%	100%	92%	83%	83%	83%	83%
% compliance with 90th percentile	--	--	--	--	--	--	--	--	--	--
% compliance with 50th percentile	--	--	--	--	--	--	--	--	--	--
% compliance with pH range	--	--	--	--	--	92%	--	--	--	--

Limit compliance assessed against the EPN released 22/1/24.

**Table 2-D: Mass loads to the environment**

Mass Loads	EPN limit	Frequency	2024-25 result
Nitrogen (kg)	7900	Annual	2843.6
Phosphorous (kg)	2000	Annual	581.3
Method	Time weighted/Grab sample method		

**Table 2-E: Performance analysis (discharge to environment)**

Effluent compliance parameter	Date(s) of non-compliance	Reasons for non-compliance	Actions to improve performance
Ammonia	16/10/2024 6/11/2024 17/07/2024 11/06/2025	Effluent ammonia typically increases through winter into spring as cold temperatures decrease biological activity/ proliferation. The extended detention time within the lagoons (up to 100 days) results in an observed lag in the effluent quality results from spring into early summer.  Elevated nitrogen largely driven by high ammonia – discussed above.	No specific actions undertaken in reporting period.  The Meander Tamar Sewerage Regional Master Plan has been completed and outlines both short- and long-term considerations for the Beauty Point STP. See Section 2.12.
Nitrogen	17/07/2024 16/10/2024 6/11/2024 11/06/2025		
E. Coli	11/06/2025	During winter decreased daylight hours reducing UV disinfection, while elevated rainfall decreases lagoon detention.	

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

No other parameters had exceedances in the reporting period.

## 2.5. Reuse annual reporting

The Beauty Point STP supplies the Beauty Point recycled water scheme which consists of one property Gypsy Hill. Following high electrical conductivity levels in effluent inflow, an Irrigation and Environmental Management Plan was submitted and accepted by the EPA in December 2021 supporting TasWater’s proposal to increase the conductivity to the recycled water scheme to 2200 $\mu$ S/cm. Following increasing trends in soil salinity and sodicity at the scheme, soil remediation activities commenced in January 2022, with pasture rehabilitation in May 2022. TasWater purchased the property in April 2024 and has completed site maintenance activities to allow the resumption of recycled water irrigation in 2024–25 irrigation season.

**Table 2-F: Reuse compliance summary**

	BOD5	pH	E coli	Conductivity
Permit/EPN limit	mg/L	Units	MPN/100ml	$\mu$ S/cm
Maximum	50	9.0	10000	2200.0
90th Percentile	--	--	--	--
50th Percentile	--	--	1000	--
Minimum	--	5.5	--	--
<b>Samples analysed</b>				
Number required	12	12	12	12
Number analysed	12	12	12	12
<b>Statistical summary</b>				
Maximum	10.0	8.6	98	3554
90th percentile	7.8	8.0	67	3452
50th percentile	5.0	7.5	28	2690
Minimum	5.0	6.9	10	2441
<b>EPN Limit Compliance</b>				
% compliance with Maximum	100%	--	100%	0%
% compliance with 90th percentile	--	--	--	--
% compliance with 50th percentile	--	--	100%	--
% compliance with pH range	--	100%	--	--

\*No recycled water above 2000  $\mu$ S/cm was provided to the recycled water scheme.

**Table 2-G: Performance analysis (discharge to reuse)**

Reuse compliance parameter	Date(s) of elevated parameter	Reasons	Actions to improve performance
Conductivity	17/07/2024 12/02/2025 20/03/2025 7/04/2025 5/05/2025 11/06/2025	Sewer network is below the high tide levels and there is infiltration in the sewer network.	No specific actions. See Section 2.4.

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

Bi-annual soil sampling was completed in November 2024 (Spring) and May 2025 (Autumn) at two long term sampling sites BP1 and BP5. Samples were taken from 1-10cm (topsoil), 10-20cm (subsoil) and 20-30cm (Subsoil) at each site. The inclusion of biannually and subsoil sampling is to assess and compare the effect of the soil remediation activities (gypsum application). The compliance audit was completed during the annual (May 2025) soil sampling. Summary of the annual soil monitoring and compliance program is provided below.

**Table 2-H: Annual recycled water scheme compliance audit and soil monitoring**

Program	Compliance audit	Annual Soil Monitoring
<b>Outcomes</b>	<p>Non-compliant.</p> <p>Provision of elevated conductivity recycled water:</p> <p>September 2024 – Likely onsite field conductivity</p> <p>January and February 2025 – due to outfall repair works. No irrigation occurred.</p> <p>Provision (2770µS/cm @25°C)</p> <p>Inadequate fencing of storage and signage on front gate.</p>	<p>Topsoil salinity remains below historical levels. with sodicity remaining relatively stable Subsoil sodicity and salinity increased and is likely due to leaching of salts from the topsoil at both sites.</p> <p>Sulphur levels remain elevated in the soil profile and is likely due to application of high rates of gypsum through the soil remediation work.</p> <p>Soil remediation activities will continue in 2025-26, and additional biannual sampling in Spring as per agronomist recommendations.</p>
<b>Comments</b>	<p>Access to the property is restricted and controlled by TasWater. TasWater have completed a number of maintenance repair activities to the site since taking over ownership in May 2024.</p>	

RWS Groundwater Status: Green

Beauty Point RWS groundwater monitoring network consists of six bores; ID numbers BPGW1-6. Bore ID BPGW1 is located downslope of the on-farm recycled water storage and upslope of the irrigation area. Bore ID BPGW2 is in the northeast of the property, whilst bore ID's BPGW3 and 4 are located within the recycled water irrigation areas and bore ID's BPGW5 and 6 are located downslope.

Bi-annual sampling at the extended analytical suite was completed as scheduled at bore ID numbers BPGW5–6 in December 2024 and March 2025. One round (annual) sampling at the standard analytical suite was completed at bore ID’s BPGW1 and 3 in April 2025 and bore ID’s BPGW2 and 4 in March 2025 as scheduled.

Annual sampling at the standard analytical suite is scheduled to continue at bore ID’s BPGW1–4 during 2025–26 sampling program. Bi-annual sampling will continue at bore ID’s BPGW5–6 and will be reduced to the standard analytical suite.

## 2.6. Ambient monitoring program

**Table 2-I: Program details**

Program	Seasonal ambient monitoring as required under EPA permit variation 18/01/2024.
Status	Ambient water quality monitoring required under EPN within the West Arm receiving environment.
Update	Ambient water quality monitoring from July – December 2024 and May – June 2025 was completed during the reporting period.
Comments	<p>Ambient water quality monitoring was conducted during effluent discharges within the West Arm/ Tamar River Estuary receiving environment. Effluent discharges to environment occurred from July 2024 to February 2025 and from May – June 2025 due to unavailability of the recycled water scheme. A new outfall was installed in March 2025. Key findings from the ambient water quality monitoring data review were:</p> <ul style="list-style-type: none"> <li>• Ammonia levels in West Arm did not exceed the ANZG marine toxicant Default Guideline Value (tDGV) at any time during discharges however the EPA DGV for SMD Estuarine Waters was exceeded in August, September and November 2024. Levels in May and June 2025 were considerably lower than 2024, likely reflecting the new outfall discharge location.</li> <li>• The nitrate EPA DGV was exceeded within West Arm in September 2024 but not on any other monitoring occasion.</li> <li>• Total nitrogen levels within West Arm varied and occasionally exceeded the EPA DGVs (August, October and December 2024) during STP effluent discharges. Levels in May and June 2025 were considerably lower than 2024, likely reflecting the new outfall discharge location.</li> <li>• Total phosphorous levels also varied within West Arm and exceeded the EPA DGVs on most monitoring occasions.</li> <li>• Enterococci levels within West Arm varied significantly and mostly exceeded the EPA low risk guideline values for waters with current or potential recreational use during STP effluent discharges in 2024. Levels were significantly lower in May and June 2025 and within the EPA low risk recreational guideline values post new outfall commissioning.</li> <li>• <i>E. coli</i> levels within West Arm only exceeded the EPA low risk guideline values for waters with current or potential recreational use during effluent discharges in August and December 2024. Levels were significantly lower in May and June 2025 and within the EPA low risk recreational guideline values post new outfall commissioning.</li> <li>• No potential toxin producing blue–green algae were detected in the West Arm receiving environment.</li> </ul> <p>Ambient monitoring during STP effluent discharges into the West Arm receiving environment indicated elevations in ammonia, nutrients and pathogen indicator levels on most occasions in 2024. Levels appeared to have reduced post commissioning of the new outfall. A detailed ambient monitoring investigation will be undertaken within the West Arm receiving environment in FY 2025/26.</p>

## 2.7. Groundwater monitoring

Site Status: Red

Beauty Point STP groundwater monitoring network consists of five groundwater bores (ID numbers: BPGW7–11) which were installed in 2021. All bores are located downgradient of the STP and likely seepage pathway between the STP and likely receiving environment o West Arm.

Bi-annual sampling was completed at the extended analytical suite for all five bores as scheduled during December 2024 and March 2025. No water samples were collected from bore ID’s BPGW9 and BPGW7 in December 2024 and March 2025 respectively due to low to no recharge of bores.

The 2024–25 groundwater monitoring event recorded signs STP highly likely impacting groundwater quality at bore ID’s BPGW8–9 and BDGW11 with elevated concentrations of several key analytes above several adopted assessment criterion. A data gap an assessment of the receiving waters for ammonia was identified, along with visual checks of integrity of lagoons during sampling events.

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

## 2.8. 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 50 out of 108 in priority. Works this year included:

- Field investigations and defect rectification
- Project ongoing to reline the sewer main to reduce salinity

## 2.9. 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 fully compliant with the 2024–25 SSMP.

Sludge at this STP is captured within the four treatment lagoons, which will be periodically desludged as required. No stockpiling occurs at this site.

**Table 2–J: Desludging status and comments**

Desludging status	Comments
Low priority	Desludging is outside of the current prioritisation planning schedule.

## 2.10. Non-compliance with other permit requirements

**Table 2-K: EPN non-compliances**

EPN condition	Description of non-conformance	Future actions to be taken
EF4 Effluent Quality Limits	Treated wastewater discharged from the activity at Discharge point 1, Must not exceed the quality limits or ranges specified	See section 2.4, discharge compliance with permit limits.
EF6 Wastewater Reuse	Treated wastewater discharged from the activity at Discharge point 2, Must not exceed the quality limits or ranges specified	See section 2.5 Reuse Annual Reporting,

## 2.11. Complaints and incident reporting

There were no incidents during the reporting period.

**Table 4-L: Complaints reporting**

Date	Category	Details	Mitigation actions
05/11/2024	Odour	Strong sewer smell from treatment plant	Crews attended the site to verify that the STP process was operating correctly. No issues were identified during the inspection.

## 2.12. Any other relevant information

**Table 2-M: Projects or significant operational events that occurred in FY 2024-25:**

Project or significant operational event	Progress
Meander Tamar Sewerage Regional Master Plan	The Meander Tamar Sewerage Regional Master Plan has been completed and outlines both short- and long-term considerations for the Beauty Point STP. TasWater has purchased the farm currently used for the RWS with a view to target 100% reuse of recycled water. Long term considerations include the potential rationalisation of the Beaconsfield STP to Beauty Point STP or, alternatively, a larger upgrade of the Beauty Point STP if growth exceeds TasWater's current projections.
Beauty Point STP outfall replacement.	Completed in March 2025

For further information on Beauty Point STP please contact TasWater on 13 6992

[www.taswater.com.au](http://www.taswater.com.au)