

## 73. Turriff Lodge STP

### 73.1 Activity and report details

Activity name	Turriff Lodge STP		
Activity address	New Norfolk		
Permit number	Licence to Operate – 3611	Date of issue	17 January 1989
EPN	8543/1	Date of issue	15 April 2013
Treatment level	Secondary Treatment		
Authorised Dry Weather Flows	4100 kL/day		
Key Influent Source	Residential/Industrial		
Contact person	Kate Westgate		
Report author	George Fitzgibbon		
Contact details	Environment@taswater.com.au		
Date of submission	30 September 2024		

**Figure 73-1: Turriff Lodge Sewage Treatment Plant**



## 73.2 Monitoring and compliance summary

### 73.2.1 Flow data

**Table 73-A: Flow monitoring summary**

	Influent	Effluent	Reuse
Location name	Plant Inlet	Derwent River	No reuse scheme
Coordinates	E 506104 N 5264298	E 506133 N 5264442	NA
Method of measurement	Level sensor	Level sensor	NA
Date of last calibration/validation (if applicable).	09/11/2023	09/11/2023	NA

**Table 73-B: Annual flow and rainfall data**

Month	Average daily influent volume (kL/day)	Rainfall (mm/month) BOM Station ID 95081	Discharge to waters total effluent volume (ML)	Discharge to reuse total effluent volume (ML)
July 2023	1,901	40.6	52.74	--
August 2023	1,804	24.4	47.22	--
September 2023	1,922	41.0	47.28	--
October 2023	1,933	60.6	48.88	--
November 2023	1,962	18.8	40.77	--
December 2023	2,057	34.4	42.56	--
January 2024	1,892	47.4	44.57	--
February 2024	1,729	6.0	37.88	--
March 2024	1,749	8.0	43.15	--
April 2024	1,802	28.6	46.60	--
May 2024	1,890	19.8	51.08	--
June 2024	1,799	34.0	50.44	--
Annual 2023-24	1,876	363.6	553.17	--
% of total discharge	--	--	100.0%	--

2023-24 monthly flow data was submitted directly to the EPA.

### 73.3 Bypass events

**Table 73-B: Bypass Event summary**

<b>Bypass ID:</b>	CABST01-OND				
<b>Bypass description:</b>	Inlet treatment bypass				
<b>Treatment bypassed:</b>	Secondary Treatment				
<b>Treatment level of impacted effluent:</b>	Screened, De-gritted, Primary Treated and Chlorinated				
<b>Flows exceeding:</b>	270 L/s (Approximate)				
<b>Discharge location:</b>	Turriff Lodge STP outfall: E506207, N5264477 (GDA94)				
Start date / time	End date / time	Duration	Volume estimate	Cause	Response actions
21/10/2023 23:39	22/10/2023 02:33	2.9 h	1543.7 kL	Rainfall	No specific actions undertaken
29/11/2023 09:33	29/11/2023 09:53	0.3 h	3.0 kL	Rainfall	No specific actions undertaken
14/12/2023 03:21	14/12/2023 04:53	1.5 h	716.7 kL	Rainfall	No specific actions undertaken
11/06/2024 08:57	11/06/2024 09:39	0.7 h	56.4 kL	Rainfall	No specific actions undertaken

### 73.4 Discharge compliance with permit limits

**Table 73-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	26.0	38	1.0	35.0	10.0	8.5	8.0	200	39.0
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	12	12	12	12
Statistical summary									
Max	30.7	70	1.04	44.0	5.6	7.6	6.6	332	17.0
90th percentile	29.0	47	1.04	38.7	5.3	7.4	6.6	39	13.1
50th percentile	24.9	28	0.68	34.1	3.7	7.3	5.9	10	9.7
Min	12.1	14	0.13	18.9	1.6	6.9	3.0	10	5.6
EPN Limit Compliance									
% compliance with Maximum	83%	83%	83%	58%	100%	--	100%	92%	100%
% compliance with 90th percentile	--	--	--	--	--	--	--	--	--
% compliance with 50th percentile	--	--	--	--	--	--	--	--	--
% compliance with pH range	--	--	--	--	--	100%	--	--	--

**Table 73-D: Mass loads to the environment**

Parameter	EPN limit	Frequency	2023-24 result
Nitrogen (kg)	--	Annual	18245.6
Phosphorous (kg)	--	Annual	3104.8
Method	Time weighted/grab sample method		

**Table 73-E: Performance analysis (discharge to environment)**

Effluent compliance parameter	Date(s) of non-compliance	Reasons for non-compliance	Actions to improve performance
Nitrogen	17/07/2023 21/08/2023 19/10/2023 2/11/2023 4/12/2023	The plant is a trickling filter process, not designed to remove ammonia or nitrogen.	No specific actions
Ammonia	17/07/2023 21/08/2023		
BOD	17/07/2023 24/04/2024	Wet weather events and elevated TSS	No specific actions
E. coli	12/03/2024	The chlorine control is limited (flow paced) leading to low chlorine results during some periods.	No specific actions
Chlorine	21/09/2023 18/01/2024	Both chlorine exceedances only slightly high	

No other parameters had exceedances in the reporting period.

### 73.5 Reuse annual reporting

No Recycled Water Scheme associated with this STP.

### 73.6 Ambient monitoring program

**Table 73-F: Program details**

<b>Program</b>	Turriff Lodge Post New Outfall Commissioning – Ambient Monitoring Plan (PNOC-AMP).
<b>Status</b>	Plume dilutions studies, ambient water quality and biological monitoring in accordance with the PNOC-AMP has been completed.
<b>Update</b>	The PNOC-AMP was completed during the reporting period.
<b>Comments</b>	<p>The PNOC-AMP to assess the STP effluent discharge impacts via the new outfall on the Derwent River Estuary receiving environment has been completed. The PNOC-AMP investigations included:</p> <ul style="list-style-type: none"> <li>• Four plume dilution studies to investigate effluent plume characteristics and dilutions under varying river flow, tidal and seasonal scenarios.</li> <li>• 12 months of monthly ambient water quality monitoring.</li> <li>• Biological monitoring during peak growth in spring, summer and autumn to assess any impacts on macroinvertebrate, diatom and algae.</li> <li>• Chlorine fate investigations to understand the impact of chlorinated effluent in fresh and estuarine water is underway.</li> </ul> <p>An Ambient Monitoring Report (AMR) is currently in preparation to detail the outcomes of the investigations. The AMR will be provided to the EPA in late 2024.</p>

### 73.7 Groundwater monitoring

No groundwater monitoring program associated with the STP.

### 73.8 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. Updates to the actions were completed in September 2024.

A Multi Criteria Assessment was undertaken by TasWater in 2024 to prioritise I&I investigation and works state-wide. This catchment was ranked 34 out of 108 in priority.

### 73.9 Sludge and biosolids

The latest revision to the Sewage Sludge Management Plan includes full details of the actions undertaken state-wide in accordance with the Management Plan.

This STP was deemed non-compliant with the 2023-24 Sewage Sludge Management Plan due to insufficient information regarding sludge transfers and digester upgrade.

There are no sludge/biosolids dewatering facilities at this site, with sludge transferred via liquid sludge transport to an alternative, proximal STP. Sludge volume produced for this site is captured at the end use/dewatered STP. Turriff Lodge sludge is currently transported to Prince of Wales Bay STP or Macquarie Point STP.

**Table 73-G: Liquid Sludge Transfer totals from Turriff Lodge to receiving STPs**

Prince of Wales STP (kL)	Macquarie Point STP (kL)	TOTAL (kL)
5397.7	1351.8	6749.5

### 73.10 Non-compliance with other permit requirements

**Table 73-G: EPN non-compliances**

EPN condition	Description of non-conformance	Future actions to be taken
EF3 Effluent quality limits for discharge to water	Discharge compliance with permit limits.	See section 73.4 Discharge compliance with permit limits and Performance Analysis.
WM2 Sewage Sludge Management Plan	Insufficient information regarding sludge transfers and digester upgrade.	Include information on sludge transfers and digester in 2024-25 SSMP.

### 73.11 Complaints and incident reporting

No complaints or incidents reported during the reporting period.

### 73.12 Any other relevant information

**Table 73-H: Projects or significant operational events that occurred in FY 2023-24:**

Project or significant operational event	Progress
Turriff Lodge STP Digester Upgrade	EPA notified of Digester Upgrade project completion on 8 August 2023.
Turriff Lodge Outfall Relocation Project	EPA notified of Turriff Lodge STP Outfall Relocation and Wetland Decommissioning project completion on 8 August 2023. Landscaping for Tynwald Park completed.

For further information on Turriff Lodge STP please contact TasWater on 13 6992  
[www.taswater.com.au](http://www.taswater.com.au)