

## 74. Ulverstone STP

### 74.1 Activity and report details

Activity name	Ulverstone STP		
Activity address	Knights Rd, Ulverstone		
Permit number	Licence to Operate 3391	Date of issue	16/04/1991
EPN	9573/1	Date of issue	5/12/2017
Treatment level	Secondary Treatment		
Authorised dry weather flows	7500 kL/day		
Key influent source	Residential/Industrial		
Contact person	Kate Westgate (Manager Environmental Performance)		
Report author	Jake Crisp (Environmental Scientist)		
Contact details	Environment@taswater.com.au		
Date of submission	30 September 2024		

**Figure 74-1: Ulverstone Sewage Treatment Plant**



## 74.2 Monitoring and compliance summary

### 74.2.1 Flow data

**Table 74-A: Flow monitoring summary**

	Influent	Effluent	Reuse
Location name	Plant Inlet	Bass Strait	No reuse scheme
Coordinates	E 428473 N 5443293	E 430028 N 5445977	NA
Method of measurement	Level sensor	Estimation based on influent	NA
Date of last calibration/validation (if applicable).	5/02/2024	NA	NA

**Table 74-B: Annual flow and rainfall data**

Month	Average daily influent volume (kL/day)	Rainfall (mm/month) BOM Station ID 91186	Discharge to waters total effluent volume (ML)	Discharge to reuse total effluent volume (ML)
July 2023	4,680	35.4	145.08	--
August 2023	4,872	82.2	151.03	--
September 2023	4,104	32.0	123.12	--
October 2023	3,216	33.4	99.70	--
November 2023	3,024	27.2	90.72	--
December 2023	3,600	85.0	111.60	--
January 2024	3,528	89.6	109.37	--
February 2024	3,024	2.2	87.70	--
March 2024	2,544	17.8	78.86	--
April 2024	3,066	47.0	91.98	--
May 2024	2,967	26.7	91.98	--
June 2024	2,920	41.6	87.61	--
Annual 2023-24	3,476	520.1	1,268.73	--
% of total discharge	--	--	100.0%	--

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

### 74.3 Bypass events

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

## 74.4 Discharge compliance with permit limits

**Table 74-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	22.0	35	--	30.0	10.0	8.5	10.0	2000	30.0
90th percentile	--	--	--	--	--	--	--	--	--
50th percentile	--	--	--	--	--	--	--	--	--
Minimum	--	--	--	--	--	6.5	--	--	--
Samples analysed									
Number required	52	52	--	52	52	52	52	52	52
Number analysed	52	52	--	52	52	52	52	52	52
Statistical summary									
Maximum	19.8	600	--	106.2	55.7	7.3	31.9	241960	1686.0
90th percentile	7.1	305	--	55.8	28.3	7.1	14.3	70041	963.6
50th percentile	0.9	11	--	5.1	1.0	7.0	0.6	24196	17.8
Minimum	0.1	5	--	1.5	1.0	6.7	0.1	10	4.0
EPN limit compliance									
% compliance with maximum	100%	73%	--	85%	81%	--	85%	35%	62%
% compliance with 90th percentile	--	--	--	--	--	--	--	--	--
% compliance with 50th percentile	--	--	--	--	--	--	--	--	--
% compliance with pH range	--	--	--	--	--	100%	--	--	--

**Table 74-D: Mass loads to the environment**

Parameter	EPN limit	Frequency	2023-24 result
Nitrogen (kg)	--	Annual	57539.3
Phosphorous (kg)	--	Annual	11952.2
Method	Flow weighted/composite method		

**Table 74-E: Performance analysis (discharge to environment)**

Effluent compliance parameter	Date(s) of non-compliance			Reasons for non-compliance	Actions to improve performance
Nitrogen	6/09/2023 6/12/2023 13/12/2023	17/01/2024 14/02/2024 24/04/2024	1/05/2024 19/06/2024	Process upsets attributed to ongoing project.	The control philosophy was amended to improve aeration control as a part of updates to the SCADA system completed in the Ulverstone STP upgrade project.  The Ulverstone STP upgrade project to reach commissioning stage in FY2024-25.
BOD	16/08/2023 30/08/2023 6/09/2023 15/11/2023 6/12/2023	13/12/2023 17/01/2024 24/01/2024 14/02/2024 13/03/2024	24/04/2024 1/05/2024 12/06/2024 19/06/2024	Non-compliant TSS, BOD and E coli are generally due to solids carry over from the secondary clarifier as a result of its inadequate size. Capacity limitations of the existing biosolids dewatering unit also contribute to these issues.	Construction of an additional secondary clarifier and upgrade to the sludge dewatering process has been completed as part of the Ulverstone STP Upgrade project (see Section 74.12). The Ulverstone STP upgrade project to reach commissioning stage in FY2024-25.
TSS	16/08/2023 30/08/2023 6/09/2023 18/10/2023 25/10/2023 1/11/2023 15/11/2023	6/12/2023 13/12/2023 17/01/2024 7/02/2024 14/02/2024 13/03/2024 27/03/2024	24/04/2024 1/05/2024 15/05/2024 5/06/2024 12/06/2024 19/06/2024		
E. coli	16/08/2023 30/08/2023 6/09/2023 1/11/2023	31/01/2024 7/02/2024 14/02/2024 21/02/2024	17/04/2024 24/04/2024 1/05/2024 8/05/2024		

Effluent compliance parameter	Date(s) of non-compliance			Reasons for non-compliance	Actions to improve performance
	29/11/2023 6/12/2023 13/12/2023 27/12/2023 3/01/2024 10/01/2024 17/01/2024 24/01/2024	28/02/2024 6/03/2024 13/03/2024 20/03/2024 27/03/2024 3/04/2024 10/04/2024	15/05/2024 22/05/2024 29/05/2024 5/06/2024 12/06/2024 19/06/2024 26/06/2024		
O&G	16/08/2023 30/08/2023 6/09/2023 13/12/2023	17/01/2024 14/02/2024 24/04/2024	1/05/2024 12/06/2024 19/06/2024	The oil and grease non-compliance are due to solids carry over from the clarifier.	
Phosphorus	16/08/2023 6/09/2023 13/12/2023	17/01/2024 14/02/2024 24/04/2024	1/05/2024 19/06/2024	Elevated phosphorus likely due to tankered waste receipt. The process is also not designed for biological phosphorus removal and there is no dosing infrastructure for chemical phosphorus removal.	The Ulverstone STP upgrade project to reach commissioning stage in FY2024-25.

No other parameters had exceedances in the reporting period.

### 74.5 Reuse annual reporting

No Recycled Water Scheme associated with this STP.

### 74.6 Ambient monitoring program

**Table 74-F: Program details**

<b>Program</b>	Ulverstone Ambient Monitoring Program as per EPN 9573/1 variation.
<b>Status</b>	Ongoing biennial, seasonal (winter and summer) water quality and biological monitoring.
<b>Update</b>	No ambient water quality or biological monitoring was undertaken during the reporting period. Next round of biennial seasonal ambient monitoring is scheduled for FY 2024-25.
<b>Comments</b>	Not applicable.

### 74.7 Groundwater monitoring

No groundwater monitoring program associated with the STP.

### 74.8 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. Update to the actions completed will be provided in the next revision due 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 10 out of 108 in priority.

Works this FY:

- Targeted field investigation completed
- CCTV 13,500m of sewer mains

### 74.9 Sludge and biosolids

The latest revision to the Sewage Sludge Management Plan (SSMP) includes full details of the actions undertaken during the reporting period.

This STP is fully compliant with the 2023-24 SSMP.

Biosolids are removed regularly from site, no stockpiling occurs.

Liquid sludge transfers also occurred from this during the reporting period, with 333kL transferred to Pardoe STP whilst dewatering upgrade project was underway.

**Table 74-G : Biosolids sludge classification**

Parameter	Number of samples	Maximum (mg/kg)	Mean (mg/kg)	Minimum (mg/kg)	BACC (mg/kg)	Contaminant classification
Arsenic	12	17.0	6.7	3.8	13.8	A
Cadmium	12	1.5	0.8	0.4	1.6	B
Chromium	12	44.4	26.3	18.3	41.1	A
Copper	12	391.0	221.4	140.0	369.0	B
Lead	12	42.6	23.0	14.9	40.3	A
Mercury	12	0.7	0.3	0.0	0.7	A
Nickel	12	47.9	30.6	17.9	48.4	A
Zinc	12	909.0	638.5	467.0	956.0	B

**Table 74-H: Volume and disposal destination**

Quantity (DST)	Average solids content	Stabilisation method	Stabilisation grade	Contamination grade	Biosolids classification	End use destination
106.7	14.02%	None	U/C	B	U/C	Dulverton Compost

Notes: DST = Dry solid tonne. U/C = Unclassified

## 74.10 Non-compliance with other permit requirements

**Table 74-I: 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 74.4 Discharge compliance with permit limits and Performance Analysis
EM2 Effluent reuse feasibility study	Effluent reuse feasibility submitted in 2013, EPA required further information prior to approval.	A desktop review into the feasibility of effluent reuse was completed in July 2021. Options to be reviewed within the Regional Master Plan for Ulverstone.
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.
EM3 Discharge Management Plan		

## 74.11 Complaints and incident reporting

**Table 74-J: Complaints reporting**

Date	Category	Details	Mitigation actions
6/02/2024	Odour	Sewer odour reported to be coming from STP	TasWater investigated and determined that there were no process upsets at the time of this complaint. However, elevated odour on this day could have been



Date	Category	Details	Mitigation actions
			attributed to Ulverstone STP upgrade activities. No further complaints received.

**Table 74-K: Incident reporting**

Date	Category	Details	Mitigation actions
18/03/2024	STP process issue	UV system offline due to malfunctioning ballasts, wipers and globes.	TasWater engaged a contractor to repair however, several parts were required to complete repairs. Are not available until October/November 2024. EPA notified.
17/10/2023	STP process issue	Gearbox associated with the inlet step screens failed.	No impact to effluent quality as TasWater were manually raking while gearbox offline. Issue has been rectified. EPA notified.
28/09/2023	STP process issue	UV system for disinfection operating at reduced capacity due to problem with wipers and globes – UVT of 50%.	TasWater manually cleaned UV channels to increase UVT. The UV wipers were repaired on 17/10/2024. EPA were updated.

## 74.12 Any other relevant information

**Table 74-L: Projects or significant operational events that occurred in FY 2023-24:**

Project or significant operational event	Progress
Ulverstone STP Upgrade	The clarifiers are now balanced, sharing the load effectively. Power reliability has improved with the energisation of a new switchboard for the dewatering building and relocation of the sludge handling switchboard. Plant automation is progressing well, with initial testing completed, allowing the poly dosing system and dewatering screw presses to start up. The delayed diffuser system for waste activated sludge is now expected to arrive earlier, which could enable full plant operations by October 2024.

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

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