

## 31. Lilydale STP

### 31.1 Activity and report details

<b>Activity name</b>	Lilydale STP		
<b>Activity address</b>	Off Golconda Road, Lilydale		
<b>Permit number</b>	Licence to Operate - 3379	<b>Date of issue</b>	21/01/1986
<b>EPN</b>	471/2	<b>Date of issue</b>	6/11/2008
<b>Treatment level</b>	Secondary Treatment		
<b>Authorised dry weather flows</b>	135 kL/day		
<b>Key influent source</b>	Residential		
<b>Contact person</b>	Kate Westgate		
<b>Report author</b>	Luisa Romero (Environmental Scientists)		
<b>Contact details</b>	Environment@taswater.com.au		
<b>Date of submission</b>	30 September 2025		

**Figure 31-1: Lilydale Sewage Treatment Plant**



## 31.2 Monitoring and compliance summary

### 31.2.1 Flow data

**Table 31-A: Flow monitoring summary**

	Influent	Effluent	Reuse
<b>Location name</b>	Inlet	McGowan's Creek	Hollybanks property
<b>Coordinates</b>	E 518093 N 5434232	E 517940 N 5434381	E 517946 N 5434394
<b>Method of measurement</b>	In line meter	Estimate based on influent	In line meter
<b>Date of last calibration/validation (if applicable).</b>	28/04/2025	NA – to be installed	28/04/2025

**Table 31-B: Annual Flow and Rainfall Data**

Month	Average Daily influent volume (kL/day)	Rainfall (mm/month) BOM Station ID 91053	Discharge to waters total effluent volume (ML)	Discharge to reuse total effluent volume (ML)
July 2024	461	149.8	0.00	14.29
August 2024	262	97.6	0.42	7.71
September 2024	311	157.4	9.32	0.00
October 2024	170	76.4	5.28	0.00
November 2024	118	70.8	3.52	0.00
December 2024	140	71.9	1.68	2.66
January 2025	85	43.7	0.51	2.11
February 2025	83	19	0.00	2.32
March 2025	80	20.8	0.00	2.48
April 2025	88	25.6	0.00	2.65
May 2025	107	53.4	0.00	3.33
June 2025	139	120.6	0.00	4.16
Annual 2025-24	171	907	20.73	41.71
<b>% of total discharge</b>	--	--	33.2%	66.8%

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

### 31.3 Bypass events

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

### 31.4 Discharge compliance with permit limits

**Table 31-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	30	50	--	40	10	8.5	10	1000	50
90th percentile	--	--	--	--	--	--	--	--	--
50th percentile	--	--	--	--	--	--	--	--	--
Minimum	--	--	--	--	--	6.5	--	--	--
<b>Samples analysed</b>									
Number required	12	12	--	12	12	12	12	12	12
Number analysed	13	12	--	13	12	12	13	12	12
<b>Statistical summary</b>									
Maximum	5.7	46.0	0.0	10.4	2.2	8.9	3.6	5172.0	208.0
90th percentile	4.5	41.4	0.0	9.6	1.5	8.8	2.6	3189.8	84.3
50th percentile	0.7	13.0	0.0	7.1	1.0	8.4	1.5	982.0	15.7
Minimum	0.1	5.0	0.0	2.8	1.0	7.2	0.8	10.0	4.0
<b>EPN limit compliance</b>									
% compliance with Maximum	100%	100%	--	100%	100%	67%	100%	50%	75%
% compliance with 90th percentile	--	--	--	--	--	--	--	--	--
% compliance with 50th percentile	--	--	--	--	--	--	--	--	--
% compliance with pH range	--	--	--	--	--	67%	--	--	--

**Table 31-D: Mass loads to the environment**

Mass Loads	EPN limit	Frequency	2024-25 result
Nitrogen (kg)	--	Annual	164.5
Phosphorous (kg)	--	Annual	28.4
Method	Time weighted/grab sample method		

**Table 31-E: Performance analysis (discharge to environment)**

Effluent compliance parameter	Date(s) of non-compliance	Reasons for non-compliance	Actions to improve performance
E. Coli	2/12/2024	Algae is believed to be the primary reason for elevated E. Coli and pH. Algae is a source of oxygen and is fundamental to lagoon treatment. The non-compliant results were during a warmer month when algal blooms typically occur.	No specific actions undertaken in reporting period.
pH	23/10/2024		

### 31.5 Reuse annual reporting

Lilydale STP supplies treated effluent to one customer on the Lilydale recycled water scheme (RWS) located at the Hollybanks property.

**Table 31-F: Reuse compliance summary**

Parameter	BOD5	pH	E coli
Permit/EPN limit	mg/L	Units	MPN/100ml
Maximum	50	9.0	10000
90th Percentile	--	--	--
50th Percentile	--	--	1000
Minimum	--	5.5	--
<b>Samples analysed</b>			
Number required	12	12	12
Number analysed	12	12	12
<b>Statistical summary</b>			
Maximum	46.0	8.9	5172
90th percentile	41.4	8.8	3190
50th percentile	13.0	8.4	982
Minimum	5.0	7.2	10
<b>EPN Limit Compliance</b>			
% compliance with Maximum	100%	--	100%
% compliance with 90th percentile	--	--	--
% compliance with 50th percentile	--	--	50%
% compliance with pH range	--	100%	--

No parameters had exceedances in the reporting period when discharging to reuse.

Annual soil sampling was completed at two sites (Primary and Secondary) at the RWS in May 2025. The annual compliance audit was completed in conjunction with the soil sampling. A summary of the findings of the programs is provided in the below table.

**Table 31-G: Annual recycled water scheme compliance audit and soil monitoring summary**

Program	Compliance audit	Soil monitoring
Outcomes	Compliant	Soil salinity rincreased at both sites and is attributed to sources other than recycled water due to no irrigation occurring at <i>Secondary</i> site.
Comments	Landowner noted very irrigation infrastructure has reached end of life and requires redesign and renewal.	Elevated levels of a number of nutrients were recorded at one or both sites and are considered consistent to previous years. These levels are likely attributed to supplementary fertiliser application and not recycled water irrigation based on the low application rates and lower nutrient levels supplied by recycled water irrigation

RWS groundwater site status: To be determined

Lilydale groundwater monitoring network consists of one bore, LDGW1. The bore was repaired (bent well casing) in August 2021. Annual sampling was completed in March 2025 as scheduled.

The 2024–25 groundwater monitoring event report is due September 2025, with a review of the results to be provided by 31 December as planned.

Annual sampling at the standard analytical suite is scheduled to continue during the 2025–26 groundwater monitoring program.

### 31.6 Ambient monitoring program

**Table 31-H: Program details**

Program	Seasonal ambient monitoring as required under EPA permit variation 18/01/2024.
Status	Ambient monitoring completed.
Update	Ambient water quality monitoring conducted seasonally to capture discharge to water events.
Comments	<p>Monthly ambient water quality monitoring occurred between July and December 2024 and again in May and June 2025. Effluent was discharged to McGowans Creek between August and December 2024 and again for one day in January 2025. Key findings from the ambient water quality data review were:</p> <ul style="list-style-type: none"> <li>• Ammonia and nitrate levels upstream and downstream of the discharge within McGowans Creek were within the Default Guideline Values (DGVs) for toxicants.</li> <li>• All results exceeded the EPA Pipers Catchment DGV for ammonia as a stressor, irrespective of whether the STP was discharging. The nitrate results occasionally exceeded the DGV. There was no trend to indicate an impact from the STP discharge on nitrate or ammonia concentrations.</li> <li>• Results for total nitrogen exceeded the EPA DGV at upstream and downstream sites. The downstream result was generally higher than the upstream result during discharge events,</li> <li>• Similar to total nitrogen, total phosphorus levels downstream were elevated compared with upstream during discharge to water events and often the upstream and downstream site exceeded the EPA DGV. The magnitude of difference between the two sites was minimal on most occasions during the discharge period.</li> <li>• There was no consistent trend to suggest an impact on suspended solids during discharge events.</li> <li>• Enterococci and <i>E. coli</i> results all exceeded the low-risk guideline value for primary recreation and stock watering at the upstream and downstream locations. There was</li> </ul>

no consistent trend to indicate that the STP was influencing pathogen indicator organisms in the receiving environment during the reporting period.

- There was one detection of potentially toxic blue-green algae at a downstream site during a sampling event when the STP was not discharging.

Ambient monitoring indicates a marginal impact to levels of nutrients, suspended solids and pathogen indicators during discharge events. The Lilydale recycled water scheme is reducing the impact to the environment during the irrigation season.

### 31.7 Groundwater monitoring

Site status: Green

Lilydale STP groundwater network consists of four monitoring bores, ID numbers LDGW4, LDGW6-8 located immediately adjacent north and south-west of the STP lagoons and further to the west.

Bi-annual sampling at the standard analytical suite was completed at bore ID LDGW7 in November 2024 and March 2025 as scheduled. Annual sampling at the standard analytical suite was completed at bore ID's LDGW4 and LDGW6 in March 2025 as scheduled. No sampling was completed at LDGW5 and LDGW8. TasWater to investigate cause.

The 2024-25 groundwater monitoring event recorded limited signs of STP impact with no exceedances of adopted assessment criterion for key nutrients.

Bi-annual sampling at the standard analytical suite is scheduled to continue at bore ID's LDGW7-8 in the 2025-26 monitoring program. Annual sampling at the standard suite is scheduled to continue for bore ID's LDGW4 and LDGW6.

### 31.8 Inflow and infiltration (I&I)

The latest revision to the TasWater Inflow and Infiltration Management Plan includes details of the actions undertaken state-wide 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 99 out of 108 in priority.

### 31.9 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 three treatment lagoons, which will be periodically desludged as required. No stockpiling occurs at this site.

**Table 31-I: Desludging status and comments**

Desludging Status	Comments
High Priority	Lagoon 1 is likely to require desludging within the next 5 years.

### 31.10 Non-compliance with other permit requirements

**Table 31-J: EPN non-compliances**

EPN Condition	Description of non-conformance	Future Actions to be taken
EF4 Effluent quality limits for discharge to water	Discharge compliance with water permit limits	See section 31.4 Environment Annual Reporting and Performance Analysis
M4 Flow meters	No recent flow meter validations.	Scheduled for installation.

### 31.11 Complaints and incident reporting

No complaints reported during the FY2024-25 reporting period.

**Table 31-K: Incident reporting**

Date	Category	Details	Mitigation actions
17/01/2025	Power outage	Power outage issue occurred at the Lilydale STP around 2am. This has impacted the transfer SPS between Lagoon 2 and Lagoon 3 and Reuse dam. Effluent was discharging via the outfall from Lagoon 2 – therefore reducing the effluent quality.	Pumps restored. Flow stopped discharging to the environment at 13.30 on the same day.

### 31.12 Any other relevant information

**Table 31-L: 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 the short-term and long-term considerations for the Lilydale STP. The plan confirms that the Lilydale STP will be retained into the future, with investment in the site and the associated recycled water scheme considered necessary to support ongoing operations.

For further information on the Lilydale STP please contact TasWater on 13 6992

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