

58. Sheffield STP

58.1 Activity and report details

Activity name	Sheffield STP		
Activity address	Old Paradise Rd, Sheffield		
Permit number	Licence to Operate - 3615	Date of issue	23/01/1989
EPN	7060/3	Date of issue	17/05/2024
Treatment level	Tertiary Treatment		
Authorised dry weather flows	350 kL/day		
Key influent source	Residential		
Contact person	Kate Westgate (Manager Environmental Scientist)		
Report author	Jake Crisp (Environmental Scientist)		
Contact details	Environment@taswater.com.au		
Date of submission	30 September 2025		

Figure 58-1: Sheffield Sewage Treatment Plant



58.2 Monitoring and compliance summary

58.2.1 Flow data

Table 58-A: Flow monitoring summary

	Influent	Effluent	Reuse
Location name	Plant Inlet	Dodders Rivulet	No reuse scheme
Coordinates	E 444652 N 5417304	E 445364 N 5417039	NA
Method of measurement	In line meter	In line meter	NA
Date of last calibration/validation (if applicable).	12/11/2024	12/11/2024	NA

Table 58-B: Annual flow and rainfall data

Month	Average daily influent volume (kL/day)	Rainfall (mm/month) BOM Station ID 91291	Discharge to waters total effluent volume (ML)	Discharge to reuse total effluent volume (ML)
July 2024	957	117.2	29.66	--
August 2024	1,109	159.4	34.38	--
September 2024	1,125	110	16.30	--
October 2024	441	65	13.44	--
November 2024	366	78.6	8.34	--
December 2024	587	106	11.03	--
January 2025	251	37.4	7.08	--
February 2025	236	13.4	6.00	--
March 2025	232	37.2	6.53	--
April 2025	218	29.8	5.93	--
May 2025	226	31.6	6.41	--
June 2025	316	94.6	9.54	--
Annual 2024-25	508	880.20	154.63	0.00
% of total discharge	--	--	100.0%	0.0%

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

58.3 Bypass events

Table 58-C: Bypass events

Bypass ID:	SF101SP0006				
Bypass description:	Overflows from the sequence batch reactor into the wet weather storage lagoons. During high flow events (seasonal discharge), the polishing lagoon discharges to Dodder Rivulet intermittently.				
Treatment bypassed:	Secondary Treatment				
Treatment level of impacted effluent:	Screened and primary treatment (settling of TSS and organic matter)				
Flows exceeding:	5 – 10 L/s (Approximate)				
Discharge location:	Sheffield STP Plant Bypass K27 (E 444606 N 5417425)				
Start date	End date	Duration (weeks)	Volume estimate	Cause	Response actions
1/07/2024	2/10/2024	13	10.1ML	Season discharge bypass to Dodder Rivulet	Bypassing sampling started; EPA and EHO notified.

58.4 Discharge compliance with permit limits

Table 58-D: 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	5	--	--	--	--	8.5	--	--	--
90th percentile	2	15	--	15	--	--	3	100	20
50th percentile	1	10	--	10	--	--	1	50	15
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	2.3	90.0	0.0	16.8	1.9	7.2	2.8	24196.0	27.0
90th percentile	2.2	5.9	0.0	13.9	1.0	7.2	1.4	1649.5	12.2
50th percentile	0.9	5.0	0.0	9.5	1.0	7.0	0.3	41.5	4.3
Minimum	0.1	5.0	0.0	4.7	1.0	6.3	0.2	10.0	4.0
EPN limit compliance									
% compliance with maximum	100%	--	--	--	--	100%	--	--	--
% compliance with 90th percentile	83%	92%	--	92%	--	--	100%	58%	92%
% compliance with 50th percentile	50%	92%	--	58%	--	--	83%	50%	92%
% compliance with pH range	--	--	--	--	--	83%	--	--	--

Table 58-E: Mass loads to the environment

Mass Loads	EPN limit	Frequency	2024-25 result
Nitrogen (kg)	1150	Annual	1468.5
Phosphorous (kg)	121	Annual	73.0
Method	Time weighted/grab sample method		

Table 58-F: Performance analysis (discharge to environment)

Effluent compliance parameter	Date of non-compliance	Reasons for non-compliance	Actions to improve performance
pH	11/07/2024	A single pH exceedance was recorded, though concurrent operational results did not indicate a non-compliance, suggesting this was an isolated anomaly rather than a true exceedance.	No specific actions.

No other parameters had exceedances in the reporting period for discharge to environment.

58.5 Reuse annual reporting

No Recycled Water Scheme associated with this STP.

58.6 Ambient monitoring program

Table 58-G: Program details

Program	Ambient monitoring required under EPN 7060/3. Biological monitoring in accordance with TasWater risk based ambient monitoring program.
Status	Ambient water quality and biennial seasonal (spring/autumn) biological (AUSRIVAS) monitoring within the Dodder Rivulet receiving environment.
Update	Quarterly ambient water quality monitoring completed during the reporting period. Biological monitoring not required during the reporting period.
Comments	<p>Quarterly ambient water quality monitoring was conducted within the Dodder Rivulet receiving environment. Key findings from the ambient water quality monitoring are summarised below:</p> <ul style="list-style-type: none"> Ammonia levels in the Dodder Rivulet did not exceed the ANZG toxicant Default Guideline Value (tDGV) at any time at either the upstream or downstream monitoring locations. Ammonia levels were relatively low at all locations with the first downstream Farm Dam – Pump House monitoring location exceeding the second downstream monitoring location within the Dodder Rivulet in July and October 2024. Conversely, upstream levels significantly exceeded both downstream monitoring locations in January and April 2025. All locations exceeded either the EPA Meander Catchment DGVs and/or the site-specific Water Quality Objectives (SSWQOs) at some time during the reporting period. Nitrate levels at all three monitoring locations were within the ANZG tDGV and the SSWQO on all occasions. All locations exceeded the EPA DGVs in July and October 2024 with both downstream locations elevated above the upstream monitoring location. All three locations were within the EPA DGV in January and April 2025. There was no direct correlation with nitrate levels in the STP effluent. Total nitrogen levels upstream and at the Farm Dam – Pump House downstream monitoring location were comparable with upstream levels generally slightly higher. The second downstream monitoring location within the Dodder Rivulet was significantly higher than the upstream and the Farm Dam – Pump House monitoring locations in January 2025 and exceed both EPA DGV and the SSWQO. This appears related to a higher total suspended solids (TSS) level at this location compared to the locations. Total phosphorus levels at all three monitoring locations exceeded the EPA DGV on all occasions with the upstream monitoring significantly exceeding both downstream locations in April 2025. There was an elevation at the Dodder Rivulet downstream monitoring location in January 2025 likely related to higher TSS. Enterococci levels at the Farm Dam – Pump House downstream monitoring location exceeded the EPA low risk guideline values for waters with current or potential recreational use in July and October 2024. Levels at both downstream locations were within the EPA low risk guidelines in January and April 2025. Levels at the upstream location were significantly elevated in January 2025 well above both downstream locations and the EPA low risk guidelines. This reflected summer low river flows and other inputs into the Dodder Rivulet. <i>E. coli</i> levels at the Farm Dam – Pump House downstream monitoring location generally exceeded the Dodder Rivulet downstream location and exceeded the EPA low risk guideline values for waters with current or potential recreational use and the draft ANZG livestock drinking water guidelines in July and October 2024, and January 2025. Levels at the upstream location were significantly elevated in January 2025 well above both downstream locations and the EPA low risk and draft livestock drinking water guidelines. This reflected summer low river flows and other inputs into the Dodder Rivulet. Potentially toxin producing BGA (<i>Dolichospermum circinale</i>) were detected at very low levels and below the EPA low alert level at both the upstream and Farm Dam – Pump House downstream monitoring locations.

58.7 Groundwater monitoring

Site status: Green (2023–24)

Sheffield STP groundwater monitoring network consists of three monitoring bores, ID numbers SFGW1–3 which are located to the west, north and east of the STP respectively.

Bi-annual sampling was completed across the network in December 2024 and May 2025 as scheduled.

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

58.8 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 18 out of 108 in priority (high). Works this period included:

- Desktop analysis to understand performance within the sewer network.

58.9 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 58-H: Desludging status and comments

Desludging status	Comments
Low Priority	Desludging of lagoons 1 and 2 will not be required in the foreseeable future.

58.10 Non-compliance with other permit requirements

Table 58-I: EPN non-compliances

EPN condition	Description of non-conformance	Actions taken
OP4 Lagoon Maintenance	Rabbit holes observed around polishing and stormwater lagoon perimeters. Slow seepage from southern end of lagoon system.	TasWater engaged a contractor to undertake pest management and subsequent lagoon repairs.
EM1 Effluent reuse feasibility study	A feasibility study for reuse of effluent from the activity must be submitted to the Director by 30 April 2025.	Refer to section 58.12 for action specifics.
EM2 Discharge management plan	A dischargement management plan must be prepared and submitted to the Director for approval by 30 April 2025.	

58.11 Complaints and incident reporting

There were no complaints received during the reporting period.

Table 58-J: Incident reporting

Date	Category	Details	Mitigation actions
18/02/2025	Mechanical	SBR offline due to gearbox and motor breakdown	Spare parts were installed and SBR issue rectified.
25/11/2024	Disinfection	The UV system went offline due to an electrical issue	Power restored and UV system online.

58.12 Any other relevant information

Table 58-K: Projects or significant operational events that occurred in FY 2024-25:

Project or significant operational event	Progress
Mersey Tamar Sewerage Regional Master Plan	The Mersey Tamar Sewerage Regional Master Plan has been completed and includes the short term and long-term considerations for the Sheffield STP. Current planning is to invest in upgrading the STP to reduce risks as per the outcomes of the Sheffield Environmental Risk Reduction project business case. This project includes reducing potential public health and livestock risks in the interim through securing the existing outfall to the Dodder Rivulet.

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

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