

32. Longford STP

32.1 Activity and report details

Activity name	Longford STP		
Activity address	Off Bishopsbourne Road, Longford		
Permit number	License to operate 3573	Date of issue	3/11/1988
EPN	10553/1 7407/3	Date of issue	20/05/2021 23/09/2020
Treatment level	Secondary Treatment		
Authorised dry weather flows	2700 kL/day		
Key influent source	Residential/Industrial 2 x Category 3 Customers, 1 x Category 4 Customers		
Contact person	Kate Westgate		
Report author	Luisa Romero (Environmental Scientist)		
Contact details	Environment@taswater.com.au		
Date of submission	30 September 2024		

Figure 32-1: Longford Sewage Treatment Plant



32.2 Monitoring and compliance summary

32.2.1 Flow data

Table 32-A: Flow monitoring summary

	Influent	Effluent	Reuse
Location name	Inlet	Back Creek	No reuse scheme
Coordinates	E 507922 N 5395712	E 508948 N 5396629	NA
Method of measurement	In line meter	In line meter	NA
Date of last calibration/validation (if applicable).	27/02/2024	27/02/2024	NA

Table 32-B: Annual flow and rainfall data

Month	Average daily influent volume (kL/day)	Rainfall (mm/month) BOM Station ID 91167	Discharge to waters total effluent volume (ML)	Discharge to reuse total effluent volume (ML)
July 2023	2,048	50.0	63.82	--
August 2023	2,235	46.0	71.49	--
September 2023	1,798	26.8	56.56	--
October 2023	1,589	32.4	47.91	--
November 2023	1,500	22.6	50.98	--
December 2023	1,542	32.8	57.08	--
January 2024	1,687	56.4	53.64	--
February 2024	1,527	9.0	44.29	--
March 2024	1,417	5.4	44.35	--
April 2024	1,576	58.8	47.67	--
May 2024	1,513	40.2	45.84	--
June 2024	1,561	48.1	47.73	--
Annual 2023-24	1,672	428.5	631.35	--
% of total discharge	--	--	100.0%	--

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

32.3 Bypass events

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

32.4 Discharge compliance with permit limits

Table 32-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	10.0	40	--	20.0	20.0	8.5	5.0	2000	--
90th percentile	5.0	30	--	15.0	15.0	--	3.0	1000	--
50th percentile	2.0	20	--	10.0	10.0	--	1.0	200	--
Minimum	--	--	--	--	--	6.5	--	--	--
Samples analysed									
Number required	12	12	--	12	12	12	12	12	12
Number analysed	22	22	--	22	22	22	22	22	22
Statistical summary									
Maximum	1.8	10	--	7.4	8.1	7.6	5.3	121	11.0
90th percentile	1.0	8	--	6.8	1.0	7.5	4.7	73	7.7
50th percentile	0.2	5	--	4.3	1.0	6.9	3.2	10	4.0
Minimum	0.0	5	--	2.8	1.0	6.7	0.5	10	4.0
EPN Limit Compliance									
% compliance with maximum	100%	100%	--	100%	100%	--	91%	100%	--
% compliance with 90th percentile	100%	100%	--	100%	100%	--	50%	100%	--
% compliance with 50th percentile	100%	100%	--	100%	100%	--	14%	100%	--
% compliance with pH range	--	--	--	--	--	100%	--	--	--

Table 32-D: Mass loads to the environment

Parameter	EPN Limit	Frequency	2023-24 result
Nitrogen (kg)	12812	Annual	2975.7
Phosphorous (kg)	2168	Annual	1916.8
Method	Time weighted/grab sample method		

Table 32-E: Performance analysis (discharge to environment)

Effluent compliance parameter	Date(s) of non-compliance	Reasons for non-compliance	Actions to improve performance
Phosphorus	21/11/2023	The new STP has aimed to achieve full biological phosphorus removal without reliance on chemical precipitation. Challenges during plant commissioning resulted in elevated phosphorus discharges as the plant biology was being established. Following this, chemical phosphorus removal was initiated to decrease effluent concentrations.	Increasing chemical alum dosing in response to high effluent phosphorus.
	19/12/2023		
	23/04/2024		
	12-month 90 th percentile limit exceeded		
	12-month 50 th percentile limit exceeded		

No other parameters had exceedances in the reporting period.

32.5 Reuse annual reporting

No Recycled Water Scheme associated with this STP.

32.6 Ambient monitoring program

Table 32-F: Program details

Program	Longford STP Upgrade Post Commissioning Ambient Monitoring Plan (AMP)
Status	Post Commissioning AMP completed during the reporting period.
Update	Post Longford STP upgrade commissioning ambient water quality and biological monitoring was completed during the reporting period as the EPA approved Post-Commissioning AMP. A continuation of the Longford STP AMP is scheduled in FY 2024-25.
Comments	<p>Ambient water quality monitoring within the Back Creek and South Esk River receiving environment was completed on a monthly basis (March 2023 – February 2024) during the reporting period. An Ambient Monitoring Report (AMR) is currently in preparation that will detail the water quality monitoring investigation findings. The AMR will be submitted to the EPA on finalisation.</p> <p>Biological monitoring of macroinvertebrates (AusRivAS) was carried out spring 2023, autumn 2024 and winter 2024 within the Back Creek receiving environment during the reporting period. A summary of the biological monitoring findings is provided below:</p> <ul style="list-style-type: none"> • There was no evidence for an impact of the STP effluent discharge on AUSRIVAS indicators at the site immediately downstream of the STP outfall in either spring 2023 or winter 2024. The only indication of an impact of the STP effluent discharge occurred in autumn 2024, with a slight decline in AUSRIVAS indicators at the site immediately downstream of the STP outfall. • In all three seasons, the most downstream site (500 m downstream of the STP outfall) scored poorly on all AUSRIVAS indicators, indicating substantial decline in water quality at this site. • Given the absence of a consistent impact of the STP effluent discharge at the site immediately downstream of the STP outfall, this decline in water quality at the most downstream site is considered unlikely to be caused by the STP discharge. The regular agistment of stock in the adjoining pasture is the most likely explanation for the consistent deterioration in stream condition observed at the most downstream site.

32.7 Groundwater monitoring

Site Status: Green – (2022-23 report)

Longford groundwater monitoring network consists of nine bores, ID numbers LOGW1-9. Bore ID's LOGW1-4 are installed in the south-west to the north-west of the STP boundary whilst bore ID's LOGW5-9 are in the north-east of the STP. One round of sampling was completed across the groundwater monitoring network in November 2023. TasWater has put measures in place for the 2024-25 sampling program to address scheduling and resourcing delays experienced in recent years.

Following delays, the 2023-24 report will be finalised and available in October 2024. Any actions to address identified potential issues will be determined following the hydrogeological review.

Due to disrupted sampling in previous years 6-monthly sampling is scheduled across the network for the 2024-25 groundwater monitoring program.

32.8 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 49 out of 108 in priority.

32.9 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 deemed non-compliant with the 2023-24 SSMP due to missing Farm Management Plans and no evidence that council approval was obtained. A stabilisation report is also yet to be submitted.

Biosolids management plans will be included in 2024-25 SSMP and testing is underway to complete the stabilisation verification report by the end of 2025.

Biosolids are removed regularly from site and TasWater are currently in the process of removing legacy sludge stockpiles.

Table 32-G: Biosolids sludge classification summary

Parameter	Number of samples	Maximum (mg/kg)	Mean (mg/kg)	Minimum (mg/kg)	BACC (mg/kg)	Contaminant classification
Arsenic	12	3.5	2.375	1.7	3.5	A
Cadmium	12	0.6	0.3	0.2	0.5	A
Chromium	12	45.8	38.4	31.3	47.8	A
Copper	12	132	99.8	68.8	132.4	B
Lead	12	9.7	7.1	5.1	9.9	A
Mercury	12	0.51	0.2	0.03	0.6	A
Nickel	12	37.7	28.1	22.4	38.5	A
Zinc	12	550	438.5	368	554.7	B

Table 32-H: Volume and disposal destination

Quantity (DST)	Average solids content	Stabilisation method	Stabilisation grade	Contamination grade	Biosolids classification	End use destination
184.6	20.1%	Anaerobic digestion	B	B	2	Logan Farm

Quantity (DST)	Average solids content	Stabilisation method	Stabilisation grade	Contamination grade	Biosolids classification	End use destination
2.8	20.1%	Anaerobic digestion	B	B	2	Dulverton Compost*
1548.0 (Stockpiled)	20.1%	Anaerobic digestion, drying	B	B	2	Henry Farm

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

*One load of dewatered biosolids was sent to Dulverton for composting due to farm being inaccessible due to wet weather.

Table 32-I: Stockpile comments

Stockpile onsite	Volume of stockpile (estimated m ³)
Yes	Legacy sludge remains within the soon to be decommissioned Longford lagoons. This sludge will be disposed of to farmland during 2024-25.

32.10 Non-compliance with other permit requirements

Table 32-J: EPN non-compliances

EPN condition	Description of non-conformance	Future actions to be taken
EF2 Effluent quality limits for discharge to water	Discharge compliance with permit limits	See section 32.4 Discharge compliance with permit limits and Performance Analysis
WM2 Sewage Sludge Management Plan	Missing FMP and no evidence that council approval was obtained	Ensure BMPs and evidence of council approval are included in 2023-24 SSMP. Testing is underway to complete the stabilisation verification report by the end of 2025.

32.11 Complaints and incident reporting

No complaints or incidents reported during the FY2023-24 reporting period.

32.12 Any other relevant information

Table 32-L: Projects or significant operational events that occurred in FY 2023-24:

Project or significant operational event	Progress
Meander Valley Sewerage Strategy (MVSS)	Longford is currently being investigated for rationalisation within the MVSS. A MVSS Strategic Business Case has been completed identifying preferred options and priorities. Work package Detailed Business Cases for specific prioritised options will be developed within PSP4/5 period.

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

www.taswater.com.au

