

## 20 Dover STP

### 20.1 Activity and report details

Activity name	Dover STP		
Activity address	Station Road, Dover		
Permit number	Licence to Operate – 3198	Date of issue	9/12/1986
EPN	Permit Conditions Environmental – 6228 EPN 11379/1 (from 21/04/2023)	Date of issue	21/04/2023
Treatment level	Secondary Treatment		
Authorised Dry Weather Flows	360 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 2023		

Figure 20-1: Dover Sewage Treatment Plant



## 20.2 Monitoring and compliance summary

### 20.2.1 Flow data

Table 20-A: Flow monitoring summary

	Influent	Effluent	Reuse
Location Name	Inlet	Port Esperance Bay	No reuse scheme
Coordinates	E 501620 N 5204372	E 502708 N 5204109	NA
Method of Measurement	In line	Estimate based on influent	NA
Date of last Calibration/Validation (if applicable).	13/07/2022	NA	NA

Table 20-B: Annual flow and rainfall data

Month	Average Daily Influent Volume (kL/day)	Rainfall (mm/month) BOM Station ID 94020	Discharge to Waters Total Effluent Volume (ML)	Discharge to Reuse Total Effluent Volume (ML)
July 2022	301	60.6	9.35	--
August 2022	445	103.8	13.78	--
September 2022	236	74.0	7.09	--
October 2022	229	88.8	7.09	--
November 2022	288	108.6	8.64	--
December 2022	228	78.2	7.06	--
January 2023	129	24.8	4.01	--
February 2023	205	39.6	5.73	--
March 2023	135	54.2	4.19	--
April 2023	142	51.6	4.25	--
May 2023	151	55.6	4.69	--
June 2023	146	101.8	4.37	--
Annual 2022-23	220	841.6	80.24	0.00
% of Total Discharge	--	--	100.0%	0.0%

2022-23 monthly flow data was submitted directly to the EPA.

## 20.2.2 Bypass events

Table 20-C : Bypass events summary

<b>Bypass ID:</b>	<b>DOVST01-BPSD-1</b>				
<b>Bypass description:</b>	Inlet pump station overflow to settling lagoon				
<b>Treatment bypassed:</b>	Secondary Treatment				
<b>Treatment level of impacted effluent:</b>	Screened, Disinfection (Chlorine)				
<b>Flows exceeding:</b>	12 L/s (Approximate)				
<b>Discharge location:</b>	Port Esperance: 502708E, 5204109N (GDA94)				
Start date / time	End date / time	Duration	Volume estimate	Cause	Response actions
17/07/22 17:23	18/07/22 09:07	15.7 h	53 kL	Rainfall Event	No specific actions undertaken
22/08/22 06:02	22/08/22 21:09	15.1 h	56 kL	Rainfall Event	No specific actions undertaken
08/11/22 08:31	08/11/22 14:28	6.0 h	20 kL	Rainfall Event	No specific actions undertaken
15/11/22 09:42	16/11/22 05:13	19.5 h	215 kL	Rainfall Event	No specific actions undertaken
21/11/22 16:51	22/11/22 01:03	8.2 h	31 kL	Rainfall Event	No specific actions undertaken
22/11/22 05:03	22/11/22 07:43	2.7 h	54 kL	Rainfall Event	No specific actions undertaken
13/12/22 15:10	13/12/22 22:51	7.7 h	49 kL	Rainfall Event	No specific actions undertaken
14/12/22 03:17	14/12/22 12:01	8.7 h	27 kL	Rainfall Event	No specific actions undertaken
15/12/22 08:24	15/12/22 10:21	2.0 h	22 kL	Rainfall Event	No specific actions undertaken
26/02/23 00:46	26/02/23 03:52	3.1 h	39 kL	Rainfall Event	No specific actions undertaken
26/02/23 09:23	26/02/23 14:12	4.8 h	57 kL	Rainfall Event	No specific actions undertaken
29/05/23 06:01	29/05/23 14:37	8.6 h	153 kL	Rainfall Event	No specific actions undertaken

31/05/23 08:07	02/06/23 00:07	40.0 h	261 kL	Rainfall Event	No specific actions undertaken
06/06/23 10:00	06/06/23 10:14	0.2 h	50 kL	Rainfall Event	No specific actions undertaken
06/06/23 15:40	08/06/23 10:21	42.7 h	821 kL	Rainfall Event	No specific actions undertaken
09/06/23 19:02	10/06/23 03:10	8.1 h	52 kL	Rainfall Event	No specific actions undertaken
10/06/23 07:29	11/06/23 02:09	18.7 h	103 kL	Rainfall Event	No specific actions undertaken
29/06/23 14:11	30/06/23 00:43	10.5 h	49 kL	Rainfall Event	No specific actions undertaken

\* Only an upper limit for the possible volume can be calculated for this bypass.

### 20.3 Discharge compliance with permit limits

Table 20-D: Compliance Summary

Parameter	Ammonia	BOD5	Chlorine	Nitrogen	Oil and grease	pH	Phosphorous	E coli	Enterococci	Total suspended solids
Permit/EPN limit*	mg/L	mg/L	mg/L	mg/L	mg/L	Units	mg/L	MPN/100ml	MPN/100ml	mg/L
Maximum	5	--	1	40	--	8.5	10	750	3200	--
90th Percentile	--	15	--	15	--	--	8	500	--	20
50th Percentile	--	10	--	7	--	--	5	200	--	10
Minimum	--	--	--	--	--	6.5	--	--	--	--
Samples analysed										
Number required	12	12	12	12	12	12	12	12	12	12
Number analysed	12	12	12	12	12	13	12	12	12	12
Statistical summary										
Max	4.1	11	1.16	7.5	2.1	8.8	4.8	331	158	14.9
90th percentile	3.84	5	1.00	6.42	1.2	8.4	4.4	209	49	13.8
50th percentile	0.35	5	0.76	2.7	1.0	8.0	3.8	10	10	5.4
Min	0.1	5	0.19	2.2	1.0	7.6	1.2	10	10	4.0

EPN Limit Compliance										
% compliance with Maximum	100%	--	83%	100%	--	--	100%	100%	100%	--
% compliance with 90th percentile	--	100%	--	100%	--	--	100%	100%	--	100%
% compliance with 50th percentile	--	92%	--	92%	--	--	100%	83%	--	83%
% compliance with pH range	--	--	--	--	--	92%	--	--	--	--

\*New EPN 11379/1 applied from 21/04/2023. Table numbers correspond to new limits.

Table 20-E: Mass loads to the environment

Parameter	EPN Limit	Frequency	2022-23 result
Nitrogen (kg)	--	Annual	310.1
Phosphorous (kg)	--	Annual	238.2
Method	Time weighted/Grab sample method		

Table 20-F: Performance Analysis (Discharge to environment)

Effluent compliance parameter	Date(s) of non-compliance	Reasons for non-compliance parameter	Actions to improve performance
pH	14/09/2022	Failure on high pH, correlating with algae bloom in lagoon.	No specific action

No other parameters had exceedances in the reporting period.

## 20.4 Reuse Annual Reporting

No Recycled Water Scheme associated with this STP.

## 20.5 Ambient monitoring program

Table 20-G: Program details

<b>Program</b>	Not applicable
<b>Status</b>	No ambient monitoring undertaken during reporting period.
<b>Update</b>	Not applicable
<b>Comments</b>	New relocated outfall was commissioned in July 2023. A post new outfall commissioning ambient monitoring plan will be finalised and implemented in FY 2023-24.

## 20.6 Groundwater monitoring

Site status: Green – Limited sign of STP impact.

Dover STP groundwater monitoring network consists of three monitoring bores ID's DOGW1-3. Sampling was completed at all three STP groundwater monitoring bores in September 2022. Due to timing and resources constraints the second round of sampling was unable to occur during the reporting period.

The data indicates low risk to receiving environment as well as groundwater users in the area due to majority of parameters below guideline levels. Groundwater levels across the monitoring network remain relatively stable compared to historic trends, bore ID's DOGW1 and 2 show a similar trend, whilst bore ID DOGW3 is the shallowest. Majority of monitoring analysis below guideline levels with DOGW2 exceeding aesthetic pH for drinking water and DOGW3 exceeding the short and long-term irrigation guidelines for total phosphorous recording a spike in levels. Biological sampling has been consistently undertaken at all three bores for several sampling rounds.

Biannual sampling at the standard suite is planned to continue at all three bores during the 2023-24 monitoring program to further investigate bore ID DOGW3.

## 20.7 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 2022 to prioritise I&I investigation and works state-wide. This catchment was ranked 1 out of 79 in priority (high).

## 20.8 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 fully compliant with the 2022-23 SSMP.

No stockpiling occurs at this site.

Table 20-H: Desludging status and comments

Desludging Status	Comments
Low Priority	Desludging is outside of the current prioritization planning schedule. Sludge from the upstream sequencing bioreactor (SBR) is removed from Dover monthly and taken to Macquarie Point for additional treatment.

## 20.9 Non-compliance with other permit requirements

Table 20-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 20.3 Discharge compliance with permit limits and Performance Analysis
OP2 Operational Procedures Manual	No contemporary Operational Procedures Manual	New SharePoint based solution for OPMMs currently being developed. First version to be implemented in FY24
F1 Flow Monitoring	No effluent flow meter installed	On flow meter program to be installed April 2024.

## 20.10 Complaints and incident reporting

No complaints for the period.

Table 20-J: Incident Reporting

Date	Category	Details	Mitigation Actions
16/10/2022	Power Outage	2 hour unanticipated power outage in Dover. As a result there was a spill from the outfall pump station at the STP. Approx. 16kL volume for 2 hours.	Notified and power issue rectified

## 20.11 Any other relevant information

Table 20-K: Projects or significant operational events that occurred in FY 2022-23:

Project or significant operational event	Progress
Dover STP Outfall Renewal and Extension project	New relocated outfall commissioned in July 2023

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

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