

## 39. Pardoe STP

### 39.1 Activity and report details

Activity name	Pardoe STP		
Activity address	Brooke St, East Devonport		
Permit number	Permit Conditions Environmental - 6084	Date of issue	18/02/1998
EPN	8857/1	Date of issue	13/03/2013
Treatment level	Primary Treatment		
Authorised dry weather flows	14000 kL/day		
Key influent source	Residential/Industrial/Tankered 2 x Category 3 Customers, 7 x Category 4 Customers		
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 39-1: Pardoe STP**



## 39.2 Monitoring and compliance summary

### 39.2.1 Flow data

**Table 39-A: Flow monitoring summary**

	Influent	Effluent	Reuse
Location name	Inlet	Bass Strait	No reuse scheme
Coordinates	E 449715 N 5441883	E 449255 N 5443071	NA
Method of measurement	In line meter	Estimate based on influent	NA
Date of last calibration/validation (if applicable).	30/10/2023	NA	NA

**Table 39-B: Annual flow and rainfall data**

Month	Average Daily Influent Volume (kL/day)	Rainfall (mm/month) BOM Station ID 91126	Discharge to Waters Total Effluent Volume (ML)	Discharge to Reuse Total Effluent Volume (ML)
July 2023	14,543	70.6	450.83	--
August 2023	13,690	65.2	424.38	--
September 2023	11,111	27.1	333.33	--
October 2023	8,821	37.9	273.46	--
November 2023	9,184	16.4	275.53	--
December 2023	13,357	60.8	414.07	--
January 2024	14,424	78.2	447.16	--
February 2024	12,429	10.6	360.43	--
March 2024	12,065	6.7	374.00	--
April 2024	12,393	60.2	371.79	--
May 2024	10,581	29.9	328.00	--
June 2024	11,310	54.4	339.31	--
Annual 2023-24	12,034	518.0	4,392.28	--
% of Total Discharge	--	--	100.0%	--

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

### 39.3 Bypass events

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

### 39.4 Discharge compliance with permit limits

**Table 39-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	--	700	--	--	70.0	--	--	--	450.0
90th percentile	--	550	--	--	40.0	--	--	--	300.0
50th Percentile	--	400	--	--	20.0	--	--	--	200.0
Minimum	--	--	--	--	--	--	--	--	--
Samples analysed									
Number required	52	52	--	52	52	52	52	52	52
Number analysed	52	52	--	52	52	52	52	52	52
Statistical summary									
Max	33.1	1053	--	65.7	99.3	7.1	11.9	241960	703.0
90th percentile	25.4	877	--	58.3	52.3	6.9	10.4	241960	160.2
50th percentile	16.0	457	--	32.1	32.3	6.6	6.6	241960	101.0
Min	7.0	160	--	18.1	14.5	4.8	3.3	98040	71.0
EPN Limit Compliance									
% compliance with Maximum	--	81%	--	--	94%	--	--	--	98%
% compliance with 90th percentile	--	67%	--	--	69%	--	--	--	98%
% compliance with 50th percentile	--	38%	--	--	12%	--	--	--	96%
% compliance with pH range	--	--	--	--	--	--	--	--	--

**Table 39-D: Mass loads to the environment**

Parameter	EPN Limit	Frequency	2023-24 result
Nitrogen (kg)	--	Annual	158337.3
Phosphorous (kg)	--	Annual	29807.4
Method	Flow weighted/Composite method		

**Table 39-E: Performance analysis (discharge to environment)**

Effluent compliance parameter	Date(s) of non-compliance	Reasons for non-compliance	Actions to improve performance	
BOD	27/09/2023	17/01/2024	<p>There is a base level concentration of soluble BOD due to trade waste discharges that cannot be removed by the installed treatment process (i.e. primary sedimentation). This means even if all solids were filtered from the effluent, the effluent would not comply with the licence conditions.</p>	<p>Completed annual preventative maintenance and cleaning of both clarifiers to help ensure optimal performance.</p> <p>TasWater continues to work with trade waste customers to improve the quality of trade waste in accordance with the Trade Waste Improvement Plan. This plan was developed to encourage discussions and help to implement operational strategies that reduce the impact of contributing customers.</p>
	13/12/2023	24/01/2024		
	27/12/2023	8/05/2024		
	3/01/2024	15/05/2024		
	10/01/2024	29/05/2024		
	12 months 50 <sup>th</sup> percentile limit exceedance			
	12 months 90 <sup>th</sup> percentile limit exceedance			
Oil and Grease	16/08/2023	15/05/2024	<p>The plant received significant amount of oil and grease from trade waste which cannot be removed by the installed treatment process (i.e. primary sedimentation).</p>	<p>A strategic business case is under development which includes rationalisation of several treatment plants to Pardoe STP and some upgrades to the plant.</p>
	3/01/2024			
	12 months 90 <sup>th</sup> percentile limit exceedance			
	12 months 50 <sup>th</sup> percentile limit exceedance			
TSS	3/04/2024	<p>The TSS non-compliance could be linked to an underperforming clarifier due to the malfunctioning slip rings (see Table 39K). This led to one clarifier being taken offline reducing the hydraulic performance resulting in solids carry over. It could also be attributed to fluctuations in trade waste loading.</p>		

No other parameters had exceedances in the reporting period.

### 39.5 Reuse annual reporting

No Recycled Water Scheme associated with this STP.

### 39.6 Ambient monitoring program

**Table 39-F: Program details**

<b>Program</b>	Pardoe Ambient Monitoring Program as per PCE 6084 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.

### 39.7 Groundwater monitoring

No groundwater monitoring program associated with this STP.

### 39.8 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 15 out of 108 in priority.

### 39.9 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 was deemed non-compliant with the 2023-24 Sewage Sludge Management Plan due to insufficient information regarding sludge inputs and contingency consideration for compost licence. Further detail on these items will be provided in the 2024-25 SSMP.

No stockpiling occurs at this site.

**Table 39-G: Biosolids sludge classification**

Parameter	Number of samples	Maximum (mg/kg)	Mean (mg/kg)	Minimum (mg/kg)	BACC (mg/kg)	Contaminant classification
Arsenic	12	3.1	2.1	1.0	3.2	A
Cadmium	12	0.7	0.4	0.2	0.7	A
Chromium	12	244.0	111.7	66.1	211.7	B
Copper	12	108.0	83.8	52.0	121.4	B

Parameter	Number of samples	Maximum (mg/kg)	Mean (mg/kg)	Minimum (mg/kg)	BACC (mg/kg)	Contaminant classification
Lead	12	16.4	10.3	5.9	15.5	A
Mercury	12	0.4	0.2	0.0	0.4	A
Nickel	12	27.1	19.0	7.5	30.9	A
Zinc	12	486.0	321.3	225.0	465.9	B

**Table 39-H: Volume and disposal destination**

Quantity (DST)	Average solids content	Stabilisation method	Stabilisation grade	Contamination grade	Biosolids classification	End use destination
881.9	24.89%	None	U/C	B	U/C	Dulverton compost

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

### 39.10 Non-compliance with other permit requirements

**Table 39-I: EPN non-compliances**

EPN condition	Description of non-conformance	Future actions to be taken
E1 Effluent quality limits for discharge to water	Discharge compliance with permit limits	See section 39.4 Discharge compliance with permit limits and Performance Analysis
Discharge Management Plan	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.
WM2 Sewage Sludge Management Plan	This STP was deemed non-compliant with the 2023-24 Sewage Sludge Management Plan due to insufficient information regarding sludge inputs and contingency consideration for compost licence.	Information regarding sludge inputs and contingency will be provided in the 2024-25 SSMP.

### 39.11 Complaints and incident reporting

**Table 39-J: Complaints Reporting**

Date	Category	Details	Mitigation actions
20/11/2023 4/12/2023 3/01/2024	Odour	Strong odour emanating from the STP	Formal odour modelling was completed during FY2024 to enhance understanding of the sources and dispersion of odours. An odour risk assessment and mitigation measures workshop will be undertaken during FY2025. There are no other known process upsets attributable to odour at the STP.

**Table 39-K: Incident reporting**

Date	Category	Details	Mitigation actions
23/04/2024	STP process issue	Clarifier 1 entered fault mode due to issues with the clarifier slip rings.	Clarifier 1 was taken offline, and all flow was directed to Clarifier 2. The malfunctioning slip rings were replaced, and Clarifier 1 was back online 24 April 2024.

### 39.12 Any other relevant information

**Table 39-K: Projects or significant operational events that occurred in FY 2023-24:**

Project or significant operational event	Progress
Pardoe Sewerage Improvement Plan (ParSIP)	Pardoe is currently being investigated for rationalisation within the ParSIP. A ParSIP 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 Pardoe STP please contact TasWater on 13 6992

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