

## 7. Bridport STP

### 7.1 Activity and report details

|                                     |  |                      |            |
|-------------------------------------|--|----------------------|------------|
| <b>Activity name</b>                | <b>Bridport STP</b>                    |                      |            |
| <b>Activity address</b>             | Off Charles Street, Bridport           |                      |            |
| <b>Permit number</b>                | Permit Conditions Environmental – 6154 | <b>Date of issue</b> | 20/03/2002 |
| <b>EPN</b>                          | 10478/1                                | <b>Date of issue</b> | 2/02/2021  |
| <b>Treatment level</b>              | Secondary Treatment                    |                      |            |
| <b>Authorised Dry Weather Flows</b> | 1400 kL/day                            |                      |            |
| <b>Key Influent Source</b>          | Residential                            |                      |            |
| <b>Contact person</b>               | Kate Westgate                          |                      |            |
| <b>Report author</b>                | Luisa Romero (Environmental Scientist) |                      |            |
| <b>Contact details</b>              | Environment@taswater.com.au            |                      |            |
| <b>Date of submission</b>           | September 30 2024                      |                      |            |

**Figure 7-1: Bridport Sewage Treatment Plant**



## 7.2 Monitoring and compliance summary

### 7.2.1 Flow data

**Table 7-A: Flow monitoring summary**

|   | Influent              | Effluent                      | Reuse                 |
|---|-----------------------|-------------------------------|-----------------------|
| <b>Location Name</b>  | Inlet                 | Andersons Bay – Granite Point | Bridport Golf Course  |
| <b>Coordinates</b>  | E 532795<br>N 5462266 | E 532008<br>N 5462708         | E 531995<br>N 5462719 |
| <b>Method of Measurement</b>                                | Inline meter          | Influent less Reuse           | Inline meter          |
| <b>Date of last Calibration/Validation (if applicable).</b> | 06/06/2023            | NA – meter to be installed    | 21/09/2023            |

**Table 7-B: Annual flow and rainfall data**

| Month                | Average Daily Influent Volume (kL/day) | Rainfall (mm/month)<br>BOM Station ID 91320 | Discharge to Waters Total Effluent Volume (ML) | Discharge to Reuse Total Effluent Volume (ML) |
|----------------------|--|---|--|---|
| July 2023            | 355                                    | 98.0  | 11.02  | 0.00  |
| August 2023          | 319                                    | 54.4  | 9.89   | 0.00  |
| September 2023       | 304                                    | 35.0  | 8.92   | 0.20  |
| October 2023         | 284                                    | 58.1  | 7.25   | 1.54  |
| November 2023        | 283                                    | 37.0  | 6.89   | 1.60  |
| December 2023        | 342                                    | 80.4  | 9.18   | 1.41  |
| January 2024         | 361                                    | 34.0  | 9.26   | 1.92  |
| February 2024        | 248                                    | 9.4   | 5.09   | 2.09  |
| March 2024           | 263                                    | 5.6   | 7.43   | 0.72  |
| April 2024           | 257                                    | 69.0  | 7.01   | 0.70  |
| May 2024             | 237                                    | 61.2  | 7.14   | 0.20  |
| June 2024            | 268                                    | 106.6                                       | 8.03   | 0.00  |
| Annual 2023–24       | 295                                    | 648.7                                       | 97.12  | 10.38   |
| % of total discharge | --                                     | --  | 90.3%  | 9.7%  |

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

### 7.3 Bypass events

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

## 7.4 Discharge compliance with permit limits

**Table 7-C: Discharge compliance with permit limits**

|                                   | Ammonia<br>as N | BOD5 | Chlorine | Nitrogen | Oil and<br>Grease | pH    | Phosphorus | E coli    | Total<br>suspended<br>solids |
|-----------------------------------|-----------------|------|----------|----------|-------------------|-------|------------|-----------|------------------------------|
| Permit/EPN limit                  | mg/L            | mg/L | mg/L     | mg/L     | mg/L              | Units | mg/L       | MPN/100mL | mg/L                         |
| Maximum                           | 33.0            | 40   | 1.0      | 40.0     | 10.0              | 8.5   | 10.0       | 750       | 40.0                         |
| 90th Percentile                   | --              | --   | --       | --       | --                | --    | --         | --        | --                           |
| 50th Percentile                   | --              | --   | --       | --       | --                | --    | --         | --        | --                           |
| Minimum                           | --              | --   | --       | --       | --                | 6.5   | --         | --        | --                           |
| <b>Samples analysed</b>           |                 |      |          |          |                   |       |            |           |                              |
| Number required                   | 12              | 12   | 12       | 12       | 12                | 12    | 12         | 12        | 12                           |
| Number analysed                   | 12              | 12   | 12       | 12       | 12                | 12    | 12         | 12        | 12                           |
| <b>Statistical summary</b>        |                 |      |          |          |                   |       |            |           |                              |
| Max                               | 33.8            | 130  | 2.09     | 57.5     | 4.5               | 8.1   | 13.2       | 1314      | 89.0                         |
| 90th percentile                   | 32.0            | 118  | 1.85     | 53.0     | 3.3               | 7.9   | 11.7       | 1177      | 75.6                         |
| 50th percentile                   | 20.4            | 89   | 1.15     | 39.9     | 1.9               | 7.6   | 9.3        | 119       | 44.0                         |
| Min                               | 0.4             | 33   | 0.22     | 13.1     | 1.1               | 7.4   | 6.0        | 10        | 16.6                         |
| <b>EPN Limit Compliance</b>       |                 |      |          |          |                   |       |            |           |                              |
| % compliance with Maximum         | 92%             | 8%   | 42%      | 50%      | 100%              | --    | 67%        | 75%       | 42%                          |
| % compliance with 90th percentile | --              | --   | --       | --       | --                | --    | --         | --        | --                           |
| % compliance with 50th percentile | --              | --   | --       | --       | --                | --    | --         | --        | --                           |
| % compliance with pH range        | --              | --   | --       | --       | --                | 100%  | --         | --        | --                           |

**Table 7-D: Mass loads to the environment**

| Parameter        | EPN Limit                        | Frequency | 2023-24 result |
|------------------|----------------------------------|-----------|----------------|
| Nitrogen (kg)    | 5400                             | Annual    | 3665.6         |
| Phosphorous (kg) | 1200                             | Annual    | 875.9          |
| Method           | Time weighted/Grab sample method |           |                |

**Table 7-E: Performance Analysis (Discharge to reuse)**

| Reuse Compliance Parameter | Date(s) of non-compliance   | Reasons for non-compliance   | Actions to improve performance   |
|----------------------------|---|--|--|
| Chlorine                   | 27/07/2023<br>8/08/2023<br>21/09/2023<br>18/10/2023                             | 23/11/2023<br>18/01/2024<br>15/02/2024                             | Bridport STP uses chlorine tablets for disinfection. This method of chlorination presents difficulties in dosage control and is susceptible to elevated chlorine and E. coli (occasionally) results after initial dosages.                 |
| E. coli                    | 15/04/2024<br>14/05/2024<br>20/06/2024  |  |  |
| BOD                        | 27/07/2023<br>8/08/2023<br>21/09/2023<br>18/10/2023<br>23/11/2023<br>14/12/2023 | 18/01/2024<br>15/02/2024<br>21/03/2024<br>15/04/2024<br>14/05/2024 | Overloaded treatment plant due to catchment growth. Insufficient lagoon aeration to achieve biological degradation of BOD, confirmed by external environmental engineering consultant. BOD further increased by high algae concentrations. |
|                            |   |  | Ongoing monitoring of aerator performance and encourage biological BOD removal.  |

| Reuse Compliance Parameter | Date(s) of non-compliance                           | Reasons for non-compliance             | Actions to improve performance   |                     |
|----------------------------|---|--|--|---------------------|
| TSS                        | 27/07/2023<br>8/08/2023<br>14/12/2023<br>15/02/2024 | 21/03/2024<br>15/04/2024<br>14/05/2024 | Overloaded treatment plant due to catchment growth. Insufficient hydraulic residence time to achieve solids settling. TSS further increased by lagoon sludge accumulation and high algae concentrations. | No specific actions |
| Ammonia                    | 18/10/2023  |  | The STP is not designed to nitrify ammonia.  | No specific actions |
| Nitrogen                   | 27/07/2023<br>8/08/2023<br>21/09/2023               | 18/10/2023<br>18/01/2024<br>15/02/2024 | The STP is not designed to remove nitrogen   | No specific actions |
| Phosphorus                 | 14/12/2023<br>18/01/2024                            | 15/02/2024<br>21/03/2024               | The STP is not designed to remove phosphorus.  | No specific actions |

Note: Non-compliances only identified for the times STP has discharged to water

No other parameters had exceedances in the reporting period

## 7.5 Reuse annual reporting

The Bridport sewage treatment plant supplies treated effluent to the Bridport Golf Club recycled water scheme. A partial scheme, the recycled water is stored in two recycled water tanks for use to irrigate the golf course/greens.

**Table 7-F: Reuse compliance summary**

|                                   | 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                   | 10   | 10    | 10        |
| <b>Statistical summary</b>        |      |       |           |
| Maximum                           | 83   | 7.7   | 1643      |
| 90th percentile                   | 77   | 7.7   | 847       |
| 50th percentile                   | 35   | 7.4   | 86        |
| Minimum                           | 5    | 6.8   | 10        |
| <b>EPN limit compliance</b>       |      |       |           |
| % compliance with Maximum         | 70%  | --    | 100%      |
| % compliance with 90th percentile | --   | --    | --        |
| % compliance with 50th percentile | --   | --    | 90%       |
| % compliance with pH range        | --   | 100%  | --        |

Note: Percentages reflective of complete data set for the year

**Table 7-G: Performance analysis (discharge to reuse)**

| Reuse Compliance Parameter | Date(s) of non-compliance              | Reasons for non-compliance | Actions to improve performance |
|----------------------------|--|----------------------------|--------------------------------|
| BOD                        | 21/09/2023<br>18/01/2024<br>15/04/2024 | As per Table 7E            | As per Table 7E                |

\*Non-compliances only identified for the times STP has discharged to reuse

As part of the recycled water soil monitoring program, annual soil sampling was completed at three locations (BT1-3) at the recycled water scheme in April 2024. The field component of the annual compliance audit was completed in conjunction with the soil monitoring, with follow up phone audit in April 2024. A summary of the findings is provided in the below table. No groundwater monitoring is completed at the RWS.

**Table 7-H: Annual recycled water scheme compliance audit and soil monitoring summary**

| Program                  | Compliance audit   | Soil monitoring   |
|--------------------------|--|---|
| <b>Compliance status</b> | Non-compliant<br>Recycled water irrigation during the day and within 50 metres buffer zone   | Soil salinity and sodicity levels remain stable at sites BT1 and BT3 and within the recommended ranges. Site BP2 levels slightly increased returning to slightly above recommended ranges but are consistent with previous years.<br>No evidence of nutrient accumulation |
| <b>Comments</b>          | New irrigation area (with mobile sprinklers) had been in set up within buffer zone of club house and day time sprinklers outside environment management plan. The area is demarcated with temporary fencing and signage and manually controlled to manage public awareness and risk.<br>Signage issues in previous audit has been addressed. | Ongoing surveillance of salinity and sodicity recommended   |

## 7.6 Ambient monitoring program

**Table 7-I: Program details**

|                 |   |
|-----------------|---|
| <b>Program</b>  | Bridport Ambient Monitoring Program.  |
| <b>Status</b>   | To be conducted every 2 years (biennially) for water quality, biological and sediment quality.<br>No ambient monitoring undertaken during the reporting period. |
| <b>Update</b>   | Ambient water quality and biological monitoring was last completed in 2021-2022. Monitoring is next scheduled for completion in 2024-2025.                      |
| <b>Comments</b> | NA – no monitoring conducted.   |

## 7.7 Groundwater monitoring

Site Status: Red – (2022-23 Report)

Bridport groundwater monitoring network consists of eight groundwater monitoring bores; ID numbers: BRDGW1, BRDGW4-7 and BRDGW11-13. One round of sampling (6-monthly) was conducted at all eight bores in May 2024. The second (annual) sampling round was not completed. TasWater has put measures in place for the 2024-25 sampling program to address scheduling and resourcing delays experienced in recent years. All sampling included bacteriological analysis.

Following delays, the groundwater monitoring report for the 2023-24 sampling event will be finalised and available in October 2024. Matters identified in the 2022-23 report indicated there was highly likely STP impact along the western edge of the STP will be in discussed in the 23-24 report following the hydrogeological review.

Biannual monitoring at the extended suite is planned to continue at all eight groundwater monitoring bores during the 2024-25 sampling program.

## 7.8 Inflow and infiltration (I&I)

The latest revision to the TasWater Inflow and Infiltration Management Plan includes full details of the actions undertaken during the reporting period. 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 92 out of 108 in priority.

## 7.9 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 fully compliant with the 2023–24 SSMP.

No stockpiling occurs at this site.

**Table 7-I: Desludging status and comments**

| Desludging status | Comments  |
|-------------------|---|
| Medium Priority   | Desludging scheduled to occur in 2027, as per the current prioritisation planning schedule. |

## 7.10 Non-compliance with other permit requirements

**Table 7-J: EPN Non-compliances**

| EPN condition   | Description of non-conformance                                       | Future actions to be taken   |
|---|--|--|
| A1 Odour Management                                       | Odour mitigation methods currently insufficient during peak seasons. | Improvements to aeration were completed during FY2024 which has improved the performance and reduced odour impacts. Bridport Master Plan and rationalisation of Scottsdale is under development with the project scheduled to commence in the latter half of FY2024. This project will confirm if a process upgrade remains the preferred strategic solution for the site. |
| G8 Wastewater Reuse EMP review                            | Wastewater reuse EMP was due in February 2023.                       | A Strategic Options Report is being developed to consider the preferred outcome for the Bridport and Scottsdale STPs upgrade requirements and disposal options considering rationalisation and a recycled water scheme (RWS).  |
| EF2 Effluent quality limits for discharge to Anderson Bay | Discharge compliance with permit limits.                             | See section 7.4 Discharge Compliance with Permit Limits.   |
| EF3 Discharge Effluent quality limits for Reuse           | Discharge compliance with reuse permit limits.                       | See section 7.5 Reuse Compliance and Performance Analysis.   |
| EM2 Effluent Reuse Feasibility Study                      | Effluent Reuse Feasibility Study overdue.                            | A Strategic Options Report is being developed to consider the preferred outcome for the Bridport and Scottsdale STPs upgrade requirements and disposal options considering rationalisation and a recycled water scheme (RWS).  |



| EPN condition                                | Description of non-conformance                    | Future actions to be taken   |
|--|---|--|
| EM3 Effluent Management                      | Discharge Management Plan (DMP) 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. |
| EM4 Discharge Management Plan                | Discharge Management Plan (DMP) overdue.          |  |
| OP5 Groundwater Contamination Abatement Plan | Groundwater Contamination Abatement Plan overdue. | Submission timeframe to be confirmed during FY2025   |

### 7.11 Complaints and incident reporting

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

### 7.12 Any other relevant information

**Table 7–J: Projects or significant operational events that occurred in FY 2023–2024**

| Project or significant operational event | Progress   |
|--|--|
| Bridport (&Scottsdale) Sewerage Strategy | A Strategic Options Report is being developed to consider the preferred outcome for the Bridport and Scottsdale STPs upgrade requirements and disposal options considering rationalisation and a recycled water scheme (RWS). Investigation is anticipated to be completed in late 2024. |
| Bridport Aeration Upgrade                | Completed  |

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

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