

20/21

Thabeban Wastewater Treatment Plant Recycled Water Scheme (SRN050)

Annual Report
July 2020 to June 2021

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1.0 Introduction

The purpose of this annual report is to provide the Department of Regional Development, Manufacturing & Waters (the Regulator or DRDMW) with information on the overall performance of the single-entity Thabeban Recycled Water Scheme (the scheme) for the period 1st July 2020 to 30th June 2021.

1.1 Annual reporting compliance

It is a requirement under Section 273 of the *Water Supply (Safety & Reliability) Act 2008* (the Act) and condition 7.4 of the Information Notice issued by DRDMW on 4th February 2020, that an annual report is prepared and submitted to the Regulator within 120 Business days of the end of each financial year. Table 1 outlines this Annual Report’s compliance against Section 273 of the Act and the Annual reporting guideline for recycled water schemes (2010).

Table 1. Annual RWMP Report Requirements.

| Act section | Details | Annual reporting guideline section | Compliance |
|-------------|---|------------------------------------|---|
| s273(1) | The relevant entity for a recycled water scheme must prepare an annual report for each financial year after a recycled water management plan for the scheme has been approved | Section 2.3 | This report is for the 2020-21 financial year. |
| s273(2)(a) | The annual report must— be prepared in accordance with the guidelines, if any, made by the regulator about the preparation of annual reports; and | Entire document | The content of this report aligns with the Annual reporting Guideline for recycled water schemes. |
| s273(2)(b) | state the outcome of any review of the recycled water management plan in the financial year to which the annual report relates, and how the matters raised in the review have been addressed; and | Section 2.4(a) | 5.1 Reviews – no regular review of the RWMP was conducted in the 2020-21 financial year |
| s273(2)(c) | contain details of the findings of, and any recommendations stated in, an internal audit report under section 260 or a regular audit report under section 261 given to the regulator in the financial year; and | Section 2.4(b) | 5.2 Audits – an internal audit was undertaken in the 2020-21 financial year A regular audit was not conducted in this financial year |
| s273(2)(d) | contain details of the information given to the regulator under section 270 or 271 in the financial year. | Section 2.4(c) | 2.0 Recycled Water Compliance - notices of noncompliance with Water Quality Criteria were reported in January 2021 |

| | | | |
|----------|--|-------------|---|
| | | | 4.0 Prescribed Incidents – there were none recorded in the 2020-21 financial year |
| s273(3) | The relevant entity must give a copy of the annual report to the regulator within 120 business days after the end of the financial year. | Section 2.3 | This report has been submitted to the regulator within the specified time. |
| ss273(4) | If a relevant entity is a recycled water provider for a single entity recycled water scheme, the annual report may be combined with a report given to the regulator under section 141. | | Bundaberg Regional Council’s Drinking Water Quality Management Plan is submitted separately to this report. |

1.2 Scheme Overview

The Thabeban Wastewater Treatment Plant (WWTP) receives raw sewage from the Thabeban sewerage network for treatment. Once treated the effluent produced meets the quality requirements of Class C recycled water under the *Public Health Regulation 2018*. This recycled water is then distributed to neighboring agricultural properties. Bundaberg Regional Council currently has approved Recycled Water Agreements with the neighboring landholders for the supply of this recycled water and a subsequent approved Recycled Water Management Plan (RWMP).

2.0 Compliance with Water Quality Criteria

Council is currently required to produce recycled water to the quality standards which are stipulated in Section 7.5 of the Thabeban Recycled Water Scheme Information Notice – February 2020 (Table 2) for the irrigation of minimally processed food crops: chilies and peas.

Table 2. Water Quality Criteria for Thabeban’s Recycled Water Scheme

| Factor | Sampling Frequency | Initial Sample Value | Annual Value |
|-------------------------|--------------------|--|---|
| <i>Escherichia coli</i> | Weekly | Must be less than 1000 cfu/100ml or MPN/100 mL | At least 95% of the samples taken for a 12-month period must contain less than 1000 cfu/100mL or MPN/100 mL |

Water quality results between 1st July 2020 and 30th June 2021 are displayed in Appendix 1 with a summary of the results represented in Table 3.

Table 3. Compliance with Water Quality Criteria for Thabeban’s Recycled Water Scheme 2020-21

| Number of Samples | Compliant Samples (Initial Value) | Non-compliant Samples | Percentage Compliance (Initial Value) | Compliant Samples (Annual Value 2020) | Non-compliant Samples (Annual Value) | Percentage Compliance (Annual Value) |
|-------------------|-----------------------------------|-----------------------|---------------------------------------|---------------------------------------|--------------------------------------|--------------------------------------|
| 52 | 49 | 3 | 94.23% | 51 | 1 | 98.08% |

2.1 Non-compliance Reported to DRDMW

During the 2020-21 reporting year Council reported three (3) exceedances of the initial value on 4th, 11th and 25th January 2021 and one (1) exceedance of the annual value, achieving 94% and 98% compliance, respectively. Monitoring results displayed in Appendix 1 show that the scheme has demonstrated an improvement in effluent quality since the latest reported exceedance. This scheme has not yet returned to compliance with the annual value, as such Council is continuing to provide monthly updates to the Regulator.

3.0 Any Failures to Test and Missing Data Information for Annual Reports

Council has conducted all required analysis during the reporting period from 1st July 2020 to 30th June 2021 (Table 4).

Table 4. Frequency of testing required during the 2020-21 reporting period.

| Parameter | Regulated standard (units) | Frequency of test | Required number of tests | Actual number of tests taken with scheduled frequency | Number of tests missed | Date/s notified to regulator | Comments |
|----------------|----------------------------|-------------------|--------------------------|---|------------------------|------------------------------|-----------------------------------|
| <i>E. coli</i> | cfu/100mL | Weekly | 52 | 52 | 0 | N/A | Scheduled number of test complete |

4.0 Prescribed Incidents

There were no recorded prescribed incidents for the Thabeban Recycled Water Scheme during this reporting period.

5.0 Re-validation assessment

5.1 Reviews

A voluntary annual management review of the Thabeban RWMP was conducted by Council in November 2020. This review is Council's initiative as a part of Continuous improvement program to review current practices, identify any changes and keep the plan updated more frequently but this is not a legislative requirement.

Council is required to undertake a regular review of the Thabeban RWMP by 18 February 2024 in accordance with section 258 of the *Water Supply Safety and Reliability Act 2011*. This review will be conducted to verify that the existing RWMP aligns with the current operations of the Thabeban WWTP.

5.2 Audits

Council will engage an external consultant to conduct an external audit as per section 7.2 of the Information Notice. This audit will be finalized before 18th February 2023 and the audit report will be submitted to the Regulator.

An internal audit of the scheme was conducted by Council's Integrated Management System Team on 16th December 2020, in accordance with Condition 7.1 of the Information Notice, with the report submitted to the Regulator on 18th December 2020. The audit found Council to be in high compliance having identified only three (3) minor non-compliances with the auditor elements and one (1) minor non-compliance with an associated third-party agreement. The audit also identified an issue of defective data supplied to the Regulator in the 2019-2020 Annual Report. The error was corrected, and the Annual report was resubmitted to the Regulator on 9th December 2020.

Council conducted annual Inspections of the Thabeban Recycled Water Scheme between December 2020 and January 2021. During these inspections it was found that activities on the properties were in accordance with the Recycled Water Agreement and associated legislation, the next round of inspections will occur in December 2021.

Appendix 1 – *E. coli* Results July 2020 to June
2021

| Sample Date | After Chlorine | Storage Lagoon |
|-------------|---------------------------------------|---------------------------------------|
| | E. coli confirmed at 45°C (cfu/100mL) | E. coli confirmed at 45°C (mpn/100mL) |
| 6/07/2020 | 0 | 1 |
| 13/07/2020 | 0 | 62 |
| 20/07/2020 | 0 | 1 |
| 27/07/2020 | 0 | 1 |
| 3/08/2020 | 10 | 1 |
| 10/08/2020 | 0 | 11 |
| 17/08/2020 | 1 | 79 |
| 24/08/2020 | 0 | 11 |
| 31/08/2020 | 0 | 1 |
| 7/09/2020 | 0 | 33 |
| 14/09/2020 | 0 | 1 |
| 21/09/2020 | 0 | 1 |
| 28/09/2020 | 0 | 1 |
| 6/10/2020 | 0 | 1 |
| 12/10/2020 | 3 | 1 |
| 19/10/2020 | 1 | 1 |
| 26/10/2020 | 0 | 1 |
| 2/11/2020 | 1 | 1 |
| 9/11/2020 | 0 | 110 |
| 16/11/2020 | 1 | 1 |
| 23/11/2020 | 0 | 1 |
| 30/11/2020 | 0 | 1 |
| 7/12/2020 | 20 | 1 |
| 14/12/2020 | 3 | 1 |
| 21/12/2020 | 0 | 1 |
| 29/12/2020 | 25 | 1 |
| 4/01/2021 | 0 | 1600 |
| 11/01/2021 | 10 | 1600 |
| 18/01/2021 | 90 | 170 |
| 25/01/2021 | 13 | 1600 |
| 1/02/2021 | 1 | 5 |
| 8/02/2021 | 18 | 210 |
| 15/02/2021 | 9 | 1 |
| 22/02/2021 | 0 | 1 |
| 1/03/2021 | 1 | 1 |
| 8/03/2021 | 0 | 1 |
| 17/03/2021 | 0 | 2 |
| 22/03/2021 | 0 | 12 |
| 29/03/2021 | 0 | 1 |
| 6/04/2021 | 0 | 1 |
| 12/04/2021 | 10 | 2 |
| 19/04/2021 | 0 | 5 |
| 27/04/2021 | 0 | 110 |
| 4/05/2021 | 0 | 1 |
| 10/05/2021 | 1 | 1 |
| 17/05/2021 | 1 | 1 |
| 24/05/2021 | 1 | 540 |
| 31/05/2021 | 1 | 1 |
| 7/06/2021 | 1 | 130 |
| 14/06/2021 | 0 | 1 |
| 21/06/2021 | 4 | 1 |
| 28/06/2021 | 0 | 1 |