

# Thabeban Wastewater Treatment Plant Recycled Water Scheme (SRN050)

**Annual Report**  
July 2021 to June 2022

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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 1<sup>st</sup> July 2021 to 30<sup>th</sup> June 2022.

### 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 4<sup>th</sup> 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 2021-22 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 2021-22 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 is due to be undertaken in December 2022. 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 – no notices of noncompliance with Water Quality Criteria reported in 2021-22 financial year.

			4.0 Prescribed Incidents – there were none recorded in the 2021-22 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 neighboring landholders for the supply of 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 1<sup>st</sup> July 2021 and 30<sup>th</sup> June 2022 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 2021-22

Number of Samples	Compliant Samples (Initial Value)	Non-compliant Samples	Percentage Compliance (Initial Value)	Compliant Samples (Annual Value 2021/22)	Non-compliant Samples (Annual Value)	Percentage Compliance (Annual Value)
52	52	0	100%	52	0	100%

## 2.1 Non-compliance Reported to DRDMW

During the 2021-22 reporting year Council reported no exceedances of the *E.coli* initial value and *E.coli* annual value, achieving 100% compliance respectively. Council reported an incorrect laboratory result to the Regulator on 24<sup>th</sup> February 2022 as per section 7.6 of the Information Notice. The routine scheduled recycled water sample from the Thabeban Storage Lagoon collected on 21<sup>st</sup> February 2022 was incorrectly analysed for faecal coliforms instead of *E.coli*. The resample collected and processed on 24<sup>th</sup> February 2022 recorded a compliant *E.coli* result of 1 MPN/100mL. Monitoring results displayed in Appendix 1 show that the scheme has demonstrated a consistent effluent quality during this financial year. As shown in Table 4 this scheme returned to full compliance for both the initial and annual values in January 2022, due to exceedances reported in the 2020/21 financial year, and Council is no longer required to provide monthly updates to the Regulator.

Table 4. Annual Value Compliance Thabeban’s Recycled Water Scheme 2021-22

Period		N° of Exceedances	% Compliance
Jul-20	Jun-21	3	94
Aug-20	Jul-21	3	94
Sep-20	Aug-21	3	94
Oct-20	Sep-21	3	94
Nov-20	Oct-21	3	94
Dec-20	Nov-21	3	94
Jan-21	Dec-21	3	94
Feb-21	Jan-22	0	100
Mar-21	Feb-22	0	100
Apr-21	Mar-22	0	100
May-21	Apr-22	0	100
Jun-21	May-22	0	100
Jul-21	Jun-22	0	100

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

Council has conducted all required analysis during the reporting period from 1<sup>st</sup> July 2021 to 30<sup>th</sup> June 2022 (Table 5).

Table 5. Frequency of testing required during the 2021-22 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 tests completed

### 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 management review of the Thabeban RWMP was not conducted by Council in the 2021-22 financial year, however the plan underwent an administrative review with a specific focus on sample location change. 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 at the Thabeban WWTP.

## 5.2 Audits

Council will engage a consultant to conduct an external regular audit of the Thabeban RWMP as per section 7.2 of the Information Notice. This audit will be finalized before 18<sup>th</sup> February 2023.

An internal audit of the scheme is due to be conducted by Council's Integrated Management System Team before 18<sup>th</sup> December 2022, in accordance with Condition 7.1 of the Information Notice.

Council conducted annual inspections of the Thabeban Recycled Water Scheme and Recycled Water User properties on 28<sup>th</sup> March, 6<sup>th</sup> April and 14<sup>th</sup> April 2022. These site inspections found that activities on the properties were in accordance with the Recycled Water Agreements and associated legislation, the next round of inspections will occur in early 2023.

## Appendix 1 – *E. coli* Results confirmed at 45°C (cfu/100mL) - July 2021 to June 2022

Sample Date	Thabeban Effluent after Chlorine	Thabeban Storage Lagoon
5/07/2021	0	1
12/07/2021	0	1
19/07/2021	3	1
26/07/2021	2	1
2/08/2021	1	1
9/08/2021	0	1
16/08/2021	0	1
23/08/2021	0	1
30/08/2021	0	1
6/09/2021	0	1
13/09/2021	36	1
20/09/2021	2	1
27/09/2021	1	5
5/10/2021	0	1
11/10/2021	0	1
18/10/2021	0	1
25/10/2021	0	1
1/11/2021	0	1
8/11/2021	100	1
15/11/2021	0	1
22/11/2021	4	1
29/11/2021	0	1
6/12/2021	2	1
13/12/2021	1680	1
20/12/2021	0	1
29/12/2021	120	1
4/01/2022	2	1
10/01/2022	19	1
17/01/2022	6	1
24/01/2022	0	1
31/01/2022	6	4
7/02/2022	27	1
14/02/2022	13	1
21-24/02/2022	0	1
28/02/2022	0	1
7/03/2022	140	2
14/03/2022	4	1
21/03/2022	170	1
28/03/2022	4	1
4/04/2022	3000	1
11/04/2022	20	2
19/04/2022	0	11
26/04/2022	0	7
3/05/2022	0	1
9/05/2022	0	2
16/05/2022	10	1
23/05/2022	0	2
30/05/2022	0	1
6/06/2022	0	34
13/06/2022	1	1
20/06/2022	0	6
27/06/2022	1	3