



**MOUNT BARKER**  
DISTRICT COUNCIL

## **ENVIRONMENT IMPROVEMENT PROGRAM**

### **MOUNT BARKER WASTEWATER TREATMENT PLANT**

**DATE: 16 October 2024**  
**STATUS: FINAL**  
**REF NO: DOC/24/162611**

#### **ENVIRONMENT PROTECTION AUTHORITY**

**THIS IS THE APPROVED**      **EIP**

**REFERRED TO IN CONDITION**      **U-195**

**OF EPA AUTHORISATION NUMBER**      **1912**

**DELEGATE** Shaun Thomas      **DATE** 18/11/2024  
Principal Adviser Compliance

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## **ACRONYMS & DEFINITIONS**

AAF	Annual Average Flow
CWMS	Community Wastewater Management Scheme
EIP	Environment Improvement Program
EPA	Environment Protection Authority
MBDC	Mount Barker District Council
MF	Microfiltration
STEDS	Septic Tank Effluent Disposal Scheme
UV	Ultraviolet
WWTP	Wastewater Treatment Plant
LWRP	Laratinga Water Recovery Plant

## 1. TRACKING AND REFERENCE INFORMATION

Document Number:	DOC/24/162611
Document Date:	16 October 2024
Licensee:	Mount Barker District Council
EPA Authorisation Number:	Licence 1912
Site to which this EIP applies:	Springs Road, Mount Barker, SA 5251 CT-6029-436 CT-6226-2 CT-6226-3
Document Produced By	Mount Barker District Council

## 2. GENERAL DESCRIPTION

### 2.1. Background

The Mount Barker WWTP treats a combination of community wastewater management scheme (CWMS) effluent and sewage from the towns of Mount Barker, Littlehampton, Brukunga and Nairne.

The existing WWTP was originally designed as simple oxidation ponds providing 60 days of storage before discharge to Mount Barker Creek. In 1997 the WWTP was upgraded to include pre-treatment and microfiltration (MF) to improve the treated wastewater quality. The Laratinga Wetlands were constructed in 2001 as part of a Mount Barker Septic Tank Effluent Disposal Scheme (STEDS) EIP (circa 1998) and provided additional treatment and storage prior to discharge to Mount Barker Creek. Three other significant upgrades have occurred after this. These include aeration of the lagoon and additional storage in 2006; an increase in the pre-treatment capacity with the introduction of an Actiflo unit; and an augmentation of the MF plant in 2014.

Concurrent to the upgrades at the WWTP site at Springs Road (2011), MBDC has also constructed storage, chlorination and ultraviolet (UV) disinfection at Little Dublin Road to provide for increased supply of reuse recycled water to customers and reduced discharge to Mount Barker Creek.

In December 2010 the South Australian Government approved the Mount Barker Urban Growth Development Plan amendment as part of the 30-year plan for Greater Adelaide. This process resulted in the rezoning of 1,310 ha of land around Mount Barker and Nairne and allowed for an initial forecast in excess of 10,000 new dwellings. This rezoning and the subsequent development placed, and continues to place, pressure on the existing WWTP with flow projected to increase from the current 4.4 ML/d (AAF) to 11.0 ML/d (AAF) by 2050 at a significant growth rate.

In addition to the development of the sewer catchment area increasing, the reuse of treated wastewater by recycling has also faced challenges. For a number of years, MBDC has an agreement with Hillgrove Resources, at Kanmantoo, who were taking an average of 884 ML/y of recycled water for dust suppression and processing of minerals. However, the ore body at Kanmantoo is now exhausted from an open-cut mining perspective and Hillgrove Resources are no longer a major customer of recycled water.

The combination of the above factors has resulted in additional pressure on the Mount Barker Creek through increases in the discharges organic and nutrient load via the Laratinga Wetlands. This EIP will proposed mitigation of the above challenges to improve the quality of the Mount Barker Creek.

## **2.2. Licence Compliance**

The licence conditions for the Mount Barker WWTP require MBDC to control emissions. These conditions broadly include:

- Only discharging treated wastewater to surface waters (Mount Barker Creek) at the specified location
- Ensuring that odour emissions from the site do not exceed 4 OU and any off-site sensitive receptor
- Taking reasonable and practicable measures to prevent contamination of stormwater from activities undertaken onsite.

MBDC is not currently operating the WWTP in contravention of any licence condition and is therefore considered to be operating in compliance with the licence. While there are no current limitations on the amount of treated wastewater that can be discharged to Mount Barker Creek, it is acknowledged by MBDC that reducing this discharge will have a positive impact on the receiving environment. As such, MBDC enters this EIP without evidence of non-compliance to date.

## **2.3. Condition Reference**

The requirement to develop and EIP for the Mount Barker WWTP is addressed in Clause 3.4 of the authorisation. This clause is reproduced in Box 1 below.

The EIP required above was submitted in accordance with the required timeframes. That EIP contained two separate compliance actions requiring resubmission of an updated EIP by 31 November 2021, which were met by the EIP dated 26 November 2021. This EIP in turn, and subsequent EIPs, contain a compliance action requiring resubmission of an updated EIP by 31 October of the following year. This compliance action from the October 2023 EIP is summarised in Box 2 below.

### 3.4 ENVIRONMENT IMPROVEMENT PROGRAM (U – 195)

The Licensee must:

- 3.4.1 develop and submit to the EPA by 1 July 2020, and EIP to the satisfaction of the EPA:
- 3.4.2 ensure that the EIP includes, but not be limited to, the following:
  - a details of the actions to be undertaken by the Licensee to ensure:
    - i the discharge of treated wastewater to Mount Barker Creek is minimised and the sustainable reuse of recycled water is maximised;
  - b clear timeframes for actions to be taken by the Licensee as set out in the EIP; and
  - c a reporting method to the EPA, including frequency, that demonstrates progress and completion of compliance actions; and
- 3.4.3 implement the EIP (or any revised EIP approved in writing by the EPA) upon approval in writing by the EPA

#### Box 1: EIP condition from EPA Licence 1912

### Compliance Action 6

By 31 October 2024, Mount Barker Council will review and resubmit a revised EIP to inform progress of outstanding actions and to provide further compliance actions for the delivery of water reuse infrastructure, where available, to the satisfaction of the EPA

#### Box 2: Approved EIP compliance actions October 2023

### 2.4. Referenced Documentation

This EIP draws references from the below documents.

**Table 1: Documents referenced in preparation of the EIP**

Doc No	Doc Date	Title	Document Description
N/A	1/07/2020	Mount Barker WWTP Environmental Improvement Program	Approved EIP addressing Licence Condition 3.4 The document had amendments submitted on 10/08/2021
DOC/21/117770	2/08/2021	Environment Improvement Program Action Plan – Mount Barker Wastewater Treatment Plant Upgrade	Action plan developed to address Compliance Actions E of the above EIP.  Details the WWTP upgrade project in detail

Doc No	Doc Date	Title	Document Description
DOC/21/117769	2/08/2021	Environment Improvement Program Action Plan – Beneficial Recuse of Mount Barker Wastewater Treatment Plant Recycled Water	Action plan developed to address Compliance Action A of the above EIP.  Details the plans to increase use of recycled water from the WWTP
DOC/21/140106	26/11/2021	Environment Improvement Program – Mount Barker Wastewater Treatment Plan	Approved EIP addressing Licence Condition 3.4  Update to the above EIP.
DOC/22/138113	24/10/2022	Environment Improvement Program – Mount Barker Wastewater Treatment Plan	Approved EIP addressing Licence Condition 3.4  Update to the above EIP.
DOC/23/176240	4/10/23	Environment Improvement Program – Mount Barker Wastewater Treatment Plan	Approved EIP addressing Licence Condition 3.4  Update to the above EIP.

## 2.5. Intent

It is the overall intent of MBDC in preparation of this updated EIP to mitigate adverse impacts on Mount Barker Creek as much as reasonably practical by:

- Reducing the load of nutrients and organics discharged to Mount Barker Creek over time by opening up new and diverse recycled water reuse opportunities and by improving the quality of treated wastewater
- Developing the future plans for upgrades of the Mount Barker WWTP and associated facilities in a manner which will satisfy not only the environmental responsibilities of MBDC, but also economic constraints including community and ratepayer expectations around affordability and service levels
- Improving the sustainability of flows to the Laratinga Wetlands by providing more natural cycles of water levels to improve biodiversity and environment health; and
- Complying with the *Environment Protection (Water Quality) Policy 2015*, conditions of EPA licence 1912 and all other legislative requirements.







### 3. INTENDED APPROACH

The updated timeline for full implementation of this EIP begins in the current financial year and is forecast to extend out to beyond 2035. Key milestones for timing are summarised in Table 2 below.

**Table 2: Indicative timeframes for delivery of this EIP**

Stages for implementing EIP		2024/25				2025/26				2026/27				2027/28		Beyond Q3 2027/28 +
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	
Capital Investment & Planning	Procurement of new WWTP															
	Construction of New WWTP															
	New WWTP ready for commissioning															
	New WWTP operational															
	Existing WWTP decommissioned and removal plan developed															
	'Opportunistic' recycled water distribution network construction in development areas (land division)															
	Further recycled water network construction in line with recycled water strategy (new market)															
EIP actions formally closed out																

This table of stages provides a general indication of the focus of activities at the Mount Barker WWTP site and in relation to expansion of the recycled water network during the period of the EIP. This table is intended as a high-level guide, and does not include the compliance actions required to be completed by MBDC. These compliance actions are included in the following section.

The 'opportunistic' network construction refers to infrastructure established at the same time as other infrastructure works associated with sub-division development in Mount Barker. This infrastructure is used to apply recycled water to parks, gardens and other open space associated with land division in Mount Barker and maintained by Council. On its own, this 'demand' will not underpin a sustainable recycled water program but does support other Council objectives around liveability and health. Markets (described as a 'new market') for the balance of the recycled water need to be developed.

## 4. EIP COMPLIANCE ACTIONS

The following compliance actions include updates from the last EIP, October 2023, with changes noted in *italics* plus some further compliance actions relating to the delivery of additional recycled water / water reuse infrastructure which are noted in ***bold italics***.

### Compliance Action 1

By 31 July 2025, Mount Barker District Council will have obtained final Development Approval for a new WWTP, *to be called the Laratinga Water Recovery Plant (LWRP)*, on the Springs Road site, including a draft EPA licence.

### Compliance Action 2

By 31 December 2026, Mount Barker District Council will have constructed a new wastewater treatment plant on the Springs Road site and *by 30 June 2027*, will have removed the existing wastewater treatment assets from service.

The new wastewater treatment plant will have the capability to operate within a range of water quality outcomes to minimise pollutant concentrations within discharges to Mount Barker Creek and to optimise operational costs associated with recycled water production and distribution.

### Compliance Action 3

By *30 June 2027*, Mount Barker District Council will have mothballed the existing Mount Barker WWTP in its entirety with full decommissioning of existing assets to be completed by 30 June 2028.

### Compliance Action 4

By 30 March 2024, Mount Barker District Council will have developed a high-level strategy for development of a sustainable recycled water market to the reasonable satisfaction of the EPA and that has been endorsed by Council elected members - **COMPLETE**

### Compliance Action 5

By 30 June 2022, Mount Barker District Council will be able to demonstrate that a budget is in place for the development of a recycled water market with the initial investment to come in the 2022/23 financial year - **COMPLETE**

### Compliance Action 6

By 31 October 2025, Mount Barker District Council will review and resubmit a revised EIP to inform progress of outstanding actions and to provide further compliance actions for the delivery of water reuse infrastructure, where available, to the satisfaction of the EPA.

### **Compliance Action 7**

By 30 June 2024, Mount Barker Council will have designed, tendered, and commenced construction of stage 1 of the Nairne / Hay Valley recycled water scheme - *COMPLETE*

### **Compliance Action 8**

Throughout the 2024/25 financial year, and beyond, Mount Barker District Council will extend the Mount Barker central recycled water scheme through recycled water main installation in development areas co-operatively with developers and the Department of Infrastructure.

*This revised EIP is informed by the adopted recycled water.*

### **Compliance Action 9**

By 30 June 2025, Mount Barker District Council will have *fully* incorporated the adopted recycled water strategy implementation timing and expenditure into the most recent iteration of the Wastewater Service Long Term Financial Plan.

### **Compliance Action 10**

***By 30 June 2025, Mount Barker District Council will have pursued grant and partnering opportunities to support implementation of the recycled water strategy in a prudent and efficient manner.***

**5. SUBMISSION**

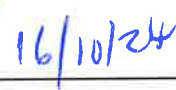
This **Mount Barker Wastewater Treatment Plant Environmental Improvement Program** is endorsed by the authorised officer below.

**SIGNED** for and on behalf of **MOUNT BARKER DISTRICT COUNCIL:**

Name:           **ANDREW STUART**

Position:       **CHIEF EXECUTIVE OFFICER**

Signed:           
\_\_\_\_\_

Date:              
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