

# **Pollution Incident Response Management Plan**



## **Gulargambone Sewage Treatment Plant (EPL #350)**

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## **1. Background**

### **1.1. Gulargambone Sewage Treatment Plant**

Coonamble Shire Council (Council) operates the Gulargambone Sewage Treatment Plant (STP). Wastewater from the town is conveyed through the sewerage reticulation system to the STP located to the north of the town adjacent to the Castlereagh Highway. The STP is an Activated Sludge treatment plant with oxidation process in a Pasveer Channel and an oxidation tertiary pond at the end of the treatment process before treated water discharge. Effluent is discharged into the Castlereagh River through a pond outlet at the North-West of the treatment plant marked as "Monitoring Point #1". The Sewage Treatment Plant operates under Environment Protection Licence #350 (EPL #350) which was issued under Section 55 of the *Protection of the Environment Operations Act 1997* by the NSW Environment Protection Authority (EPA).

### **1.2. Pollution Incident Response Management Plan (PIRMP) Purpose**

As per the *Protection of the Environment Operations Act 1997* (the POEO Act), the holder of an Environment Protection Licence must prepare, keep, test and implement a pollution incident response management plan (PIRMP) that complies with Part 5.7A of the POEO Act in relation to the activity to which the licence relates.

If a pollution incident occurs in the course of an activity so that material harm to the environment (within the meaning of section 147 of the POEO Act) is caused or threatened, the person carrying out the activity must **immediately** implement this plan in relation to the activity required by Part 5.7A of the POEO Act.

The EPL#350 contains requirements to report pollution incidents as outlined in Section 6, R2 - Notification of Environmental Harm:

- *The licensee or its employees must notify the EPA of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.*
- R2.1. Notifications must be made by telephoning the Environment Line service on 131 555.
- R2.2 The licensee must provide written details of the notification to the EPA within seven (7) days of the date on which the incident occurred.

A copy of this plan must be kept at the licensed premises and be made available on request by an authorised EPA officer and to any person who is responsible for implementing this plan.

## 2. Pollution Incident Response Planning

### 2.1. Description and likelihood of hazards

Risk assessments were conducted by Council. The main hazards identified through these assessments, along with control measures to minimise the occurrence and consequences (people and environment) of the identified risks, are outlined in Table 1.

**Table 1.** Hazards identified.

Location	Hazard	Control Measure/s	Consequence	Likelihood of material harm	Escalating Factors
Sewer Treatment Plant	<ul style="list-style-type: none"> <li>- Insufficient treatment</li> <li>- Wet weather overflow</li> </ul>	Adequate storage capacity in oxidation pond.	Pollution of downstream water body	Low	<ul style="list-style-type: none"> <li>- Significant rainfall event</li> <li>- Flood event</li> <li>- Plant malfunction</li> </ul>
Sewer reticulation network	Sewer choke causes sewer reticulation overflow	<ul style="list-style-type: none"> <li>- Council Water and Sewer Staff on call 24hrs;</li> <li>- Maintain equipment for sewer lines clean up and unblocking;</li> <li>- Contact contractor trucks for pump out.</li> </ul>	<ul style="list-style-type: none"> <li>- Local soil contamination;</li> <li>- Community contact with untreated sewage;</li> <li>- Pollution of downstream water body.</li> </ul>	Low	<ul style="list-style-type: none"> <li>- Unapproved material discharged to sewer network;</li> <li>- Ageing pipeline network;</li> <li>- Plant debris (roots) entering pipes.</li> </ul>
Sewer Pump Station	Pump station failure causes sewer overflow	<ul style="list-style-type: none"> <li>- Council Water and Sewer Staff on call 24hrs;</li> <li>- Pump stations connected to telemetry;</li> <li>- Standby pumps in high-risk pump stations;</li> <li>- Contact contractor trucks for pump out.</li> </ul>	<ul style="list-style-type: none"> <li>- Local soil contamination.</li> <li>- Community contact with untreated sewage;</li> <li>- Pollution of downstream water body.</li> </ul>	Moderate	<ul style="list-style-type: none"> <li>- Unapproved material discharged to sewer network;</li> <li>- Significant rainfall event.</li> </ul>

### 2.2. Potential Pollutants and Safety Equipment

A range of safety equipment and alarms system are maintained for use during emergencies and incidents. Details of potential pollutants and safety equipment are provided in Table 2.

**Table 2.** Potential pollutants and safety equipment.

Location	Potential Pollutant	Maximum Quantity	Safety Equipment & Devices	Storage	Alarms
Sewer Treatment Plant	Sewage	ADWF 50kL/day (approx.)	- General PPE; - General labouring tools; - Confined space equipment; - pH meter; - First aid kit.	- Water & Sewer staff Depot; - Water & Sewer staff vehicles; - STP site shed.	SCADA alarms: high level warning and pump failure.
Sewer reticulation network	Sewage	Site specific	- General PPE; - General labouring tools; - Confined space equipment; - pH meter; - Disinfectant material; - First aid kit.	- Water & Sewer staff Depot; - Water & Sewer staff vehicles; - STP site shed.	SCADA alarms: high level warning and pump failure.

### 2.3. Maps

Pollution incident response maps have been prepared to facilitate planning for incident response and provide readily accessible and accurate information to support the assessment of an incident and assist in the implementation of incident response procedures and clean-up.

The following maps are provided in Appendix A:

- Map 1: Gulargambone locality;
- Map 2: Gulargambone Sewer Treatment Plant features.

### 2.4. Duty to notify pollution incidents

#### 2.4.1. POEO Act Definitions

**A pollution incident** is defined by the Protection of the Environment Operations Act (1997) as: *An incident or set of circumstances during or as a consequence of which there is or is likely to be a leak, spill or other escape or deposit of a substance, as a result of which pollution has occurred, is occurring or is likely to occur. It includes an incident or set of circumstances in which a substance has been placed or disposed of on premises, but it does not include an incident or set of circumstances involving only the emission of any noise.*

**Material harm** to the environment is defined by the POEO Act (1997) under Part 5.7,

Section 147:

(1) For the purposes of this Part –

(a) harm to the environment is material if –

- (i) it involves actual or potential harm to the health or safety of human beings or to the ecosystems that is not trivial, or
- (ii) it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (or such other amount as is prescribed by the regulations), and

(b) loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment.

(2) For the purposes of this Part, it does not matter that harm to the environment is caused only in the premises where the pollution incident occurs.

Pollution incidents causing or threatening material harm **to be notified**:

- (1) **Kinds of incidents to be notified:** This Part applies where a pollution incident occurs in the course of an activity so that material harm to the environment is caused or threatened.
- (2) **Duty of person carrying on activity to notify:** A person carrying on the activity must, **immediately** after the person becomes aware of the incident, notify each relevant authority of the incident and all relevant information about it.
- (3) **Duty of employee engaged in carrying on activity to notify:** A person engaged as an employee in carrying on an activity must, **immediately** after the person becomes aware of the incident, notify the employer of the incident and all relevant information about it. If the employer cannot be contacted, the person is required to notify each relevant authority.
- (4) **Duty of employer to notify:** Without limiting subsection (2), an employer who is notified of an incident under subsection (3) or who otherwise becomes aware of a pollution incident which is related to an activity of the employer, must, **immediately** after being notified or otherwise becoming aware of the incident, notify each relevant authority of the incident and all relevant information about it.

### **3. Pollution Incident Response**

#### **3.1. Identification and actions to be taken during or immediately after pollution incident**

As per the definition of pollution incident and immediate notification of incident outlined in Section 2.4.1 and resulting from hazards identified in Table 1, Council has identified the following incidents related to Gulargambone Sewer Treatment Plant, sewer reticulation network and sewer pump stations operations that require immediate notification:

- Sewer Treatment Plant oxidation pond or sludge lagoon overflow that reaches a nearby waterway.
- Pump station failure, SCADA failure and standby pumps failure resulting in an overflow from a pump station that reaches a nearby waterway.
- Sewer reticulation system chokes resulting in an overflow that reaches a nearby waterway.

Procedure for immediate response to pollution incident are outlined in Flowchart in Figure 1.

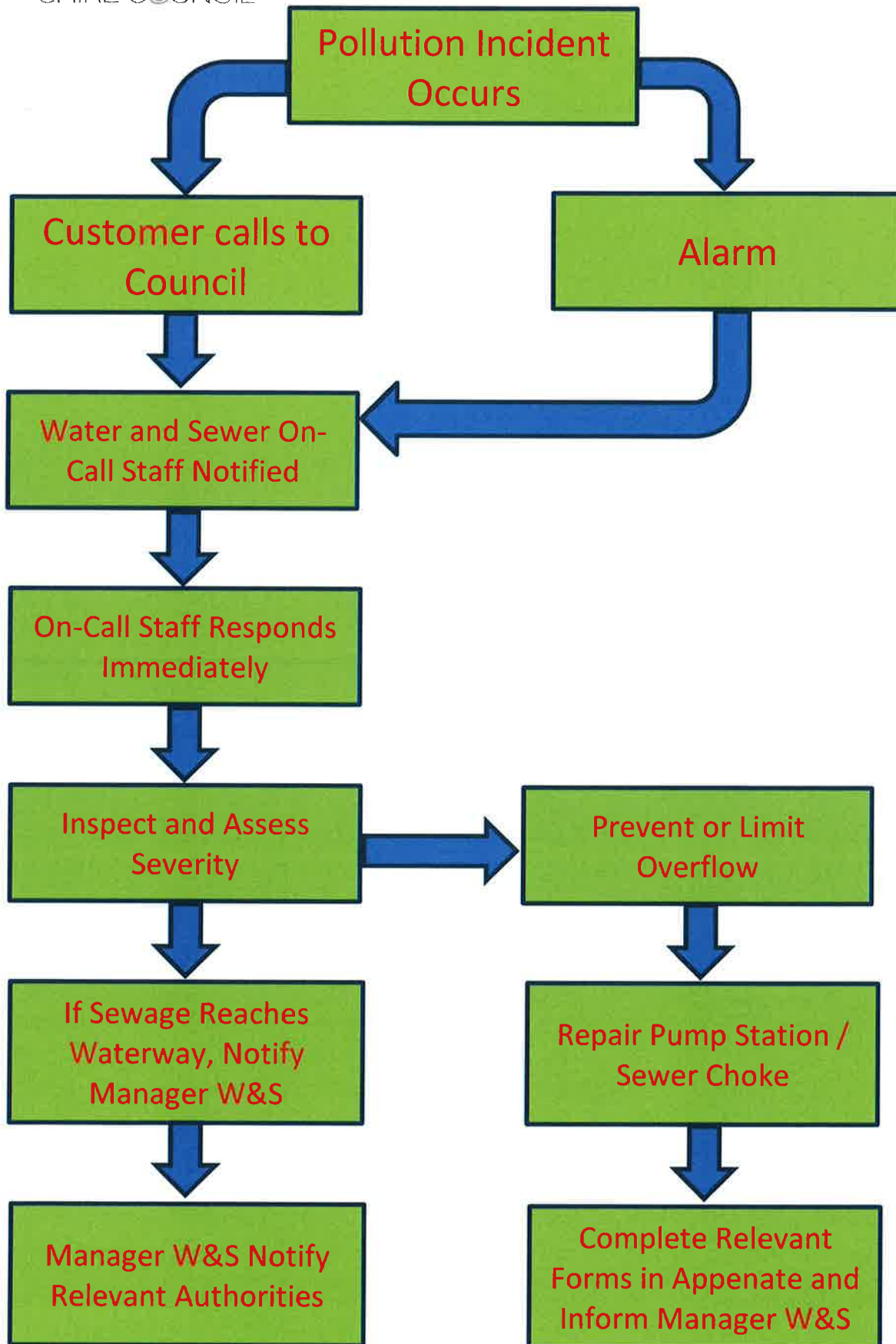


Figure 1. Pollution Incident Flowchart.



**3.2. Pollution Incident – persons responsible**

Contact details for Council personnel and external authorities requiring notification are provided in Table 3 and Table 4.

**Table 3. Pollution Incident – persons responsible contact details.**

<b>Name</b>	<b>Role</b>	<b>Contact Number</b>
Colin Jerrett	Gulargambone Leading Hand Parkes&Urban Services	0439 281 118
Michael Jackson	Water & Sewer Supervisor	0437 271 936
Clay Wrigley	Wastewater Treatment Operator	0484 137 084
On-Call	After hours emergency contact Water and Sewer	0428 217 420
Sergei Iagunkov	Manager Water and Sewer	0427 271 968
Kerrie Murphy	Director Infrastructure	0427 271 903
Council	Main Council Contact	02 6827 1900

**Table 4. Pollution Incident – external authorities contact details.**

<b>Organisation/Contact</b>	<b>Contact Number</b>
Emergency Services	000
EPA Enviro Line	131 555
NSW Health, Public Health Unit, Environmental Health Officer – Mark Nave	0407 551 548
NSW Health, Public Health Officer On-Call	02 6809 6809 0418 866 397
SafeWork NSW	131 050
NSW Rural Fire Service (Coonamble)	02 6822 4422

**3.3. Pollution Incident – persons responsible for incident management**

In the event of an immediate notification incident, responsibilities for incident management are as follows:

- On Call Water and Sewer Operator is responsible for actioning response to the incident and informing Manager Water and Sewer of the incident.
- Manager Water and Sewer is responsible for notifying external authorities and ensuring adequate resources are available for incident response.
- Water and Sewer Operator responsible for filling out Council's internal environmental incident form and presenting it to Manager Water and Sewer for further action.
- Director Infrastructure is responsible for liaising with the media and notifying potentially affected community.
- Manager Water and Sewer is responsible to determine and inform Director of Infrastructure about the most appropriate means of contacting potentially affected community, including:

- Door knocking;
- Letter Box drop;
- Local media;
- Social networks (like Council's Facebook Page);
- Council website;
- Signage.

Information provided to the community would depend on the incident but could include:

- Description of incident;
- Status of incident;
- Response actions;
- Likely duration.

As per Council's Environmental Protection License, the licensee must provide written details of the notification to the EPA within seven days of the date on which the incident occurred.

### **3.4. Potential Pollution Incident prevention management and response**

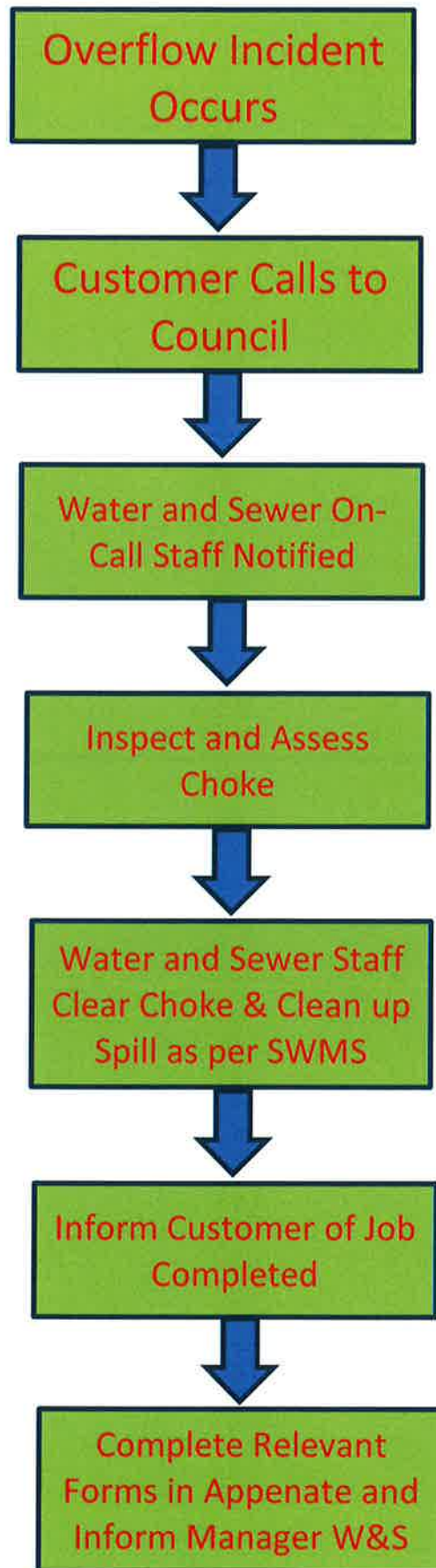
Council maintains incident response procedures for other potential pollution incidents throughout the sewer network including:

- Sewer choke (localised overflow not reaching waterway);
- Sewer pump faults that may lead to overflow.

The EPL requires details of the incidents to be recorded and maintained by Council. Where sewage or partially treated sewage is discharged from the premises as a result of a bypass of the sewage treatment plant, or an observed or reported overflow has occurred from the reticulation system, and overflow or a bypass may pose a risk to public health, the licensee is to promptly give appropriate notification to any parties that are likely to be affected, including:

- the potentially affected community;
- NSW Health

When the licensee notifies NSW Health of a bypass or overflow incident the licensee must also notify the EPA. Notifications are to be given as soon as practicable after the licensee or one of the licensee's employees or agents becomes aware of the notifiable bypass event.



**Figure 2.** Potential Pollution Incident Prevention Response Flowchart.

#### 4. Staff training

Personnel involved in water and sewer operations undertake a range of training to assist in the response to potential incidents and to test the adequacy of incident response procedures and plans. Details of the staff training is provided in Table 5.

**Table 5.** Incident Response Staff Training.

Type of Training	Personnel Involved	Frequency	Records
Induction	New Staff	Once	People & Culture
Overflow Clean up	New Sewer Staff	On-the-Job	Nil
Toolbox meetings	Water and Sewer Operators	Daily	Nil
Confined Space	Water and Sewer Operators Water & Wastewater Treatment Operators	Once + refresher every 2 years	People & Culture
DPE Part 1 – Basic Wastewater Treatment Operations	Water & Wastewater Treatment Operators Water and Sewer Supervisor	Once	People & Culture
DPE Part 2 – Advanced Wastewater Treatment Operations	Water & Wastewater Treatment Operators Water and Sewer Supervisor	Once	People & Culture
PIRMP Testing	Water and Sewer Staff	Annual	Report
Incident debrief	Personnel involved in incident	Within one month of an incident	Minutes

#### 5. PIRMP testing and update

PIRMP should be tested every 12 months and within one month of any pollution incident that caused or threatened material harm to the environment. The PIRMP will be reviewed in following cases including but not limited to:

- Changes to EPL#350;
- Changes to legislation requirements;
- Annual PIRMP testing;
- Changes to Gulargambone Sewer Treatment Plant process;
- Recommendations arising from an incident debrief.

PIRMP testing and update details are provided in Tables 6 and 7.


**Table 6. PIRMP Testing Details.**

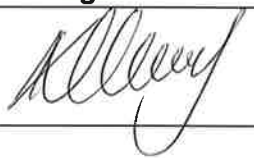
<b>Date Tested</b>	<b>Tested By</b>	<b>Test Details</b>	<b>Test Findings</b>	<b>Next scheduled testing date</b>
13/12/2023	Colin Jerrett Michael Jackson Clay Wrigley Craig Nichols Michael Budworth	<ul style="list-style-type: none"> <li>- PIRMP contents review</li> <li>- Potential Pollutants and Hazards Identification and discussion</li> <li>- Persons responsible and contact details discussion</li> <li>- Simulation Pollution Incident Scenario: Both pumps at PS#1 stopped working, overflow discovered at daily check.</li> </ul>	<ul style="list-style-type: none"> <li>- PIRMP thoroughly reviewed and all contents are actual;</li> <li>- Team members aware of what is required in response to pollution incident and notification procedure;</li> <li>- Copy of PIRMP was reminded to be kept at STP.</li> </ul>	12/12/2024

**Table 7. PIRMP Update Details.**

<b>Update Date</b>	<b>Reason for Update</b>	<b>Update Details</b>	<b>Update uploaded to website</b>	<b>Version</b>
15/10/2020				2.2
20/07/2021				2.3
28/07/2022				2.4
14/12/2023	Annual Testing	PIRMP restructure, contact details updates, maps updates	15/12/2023	3.0

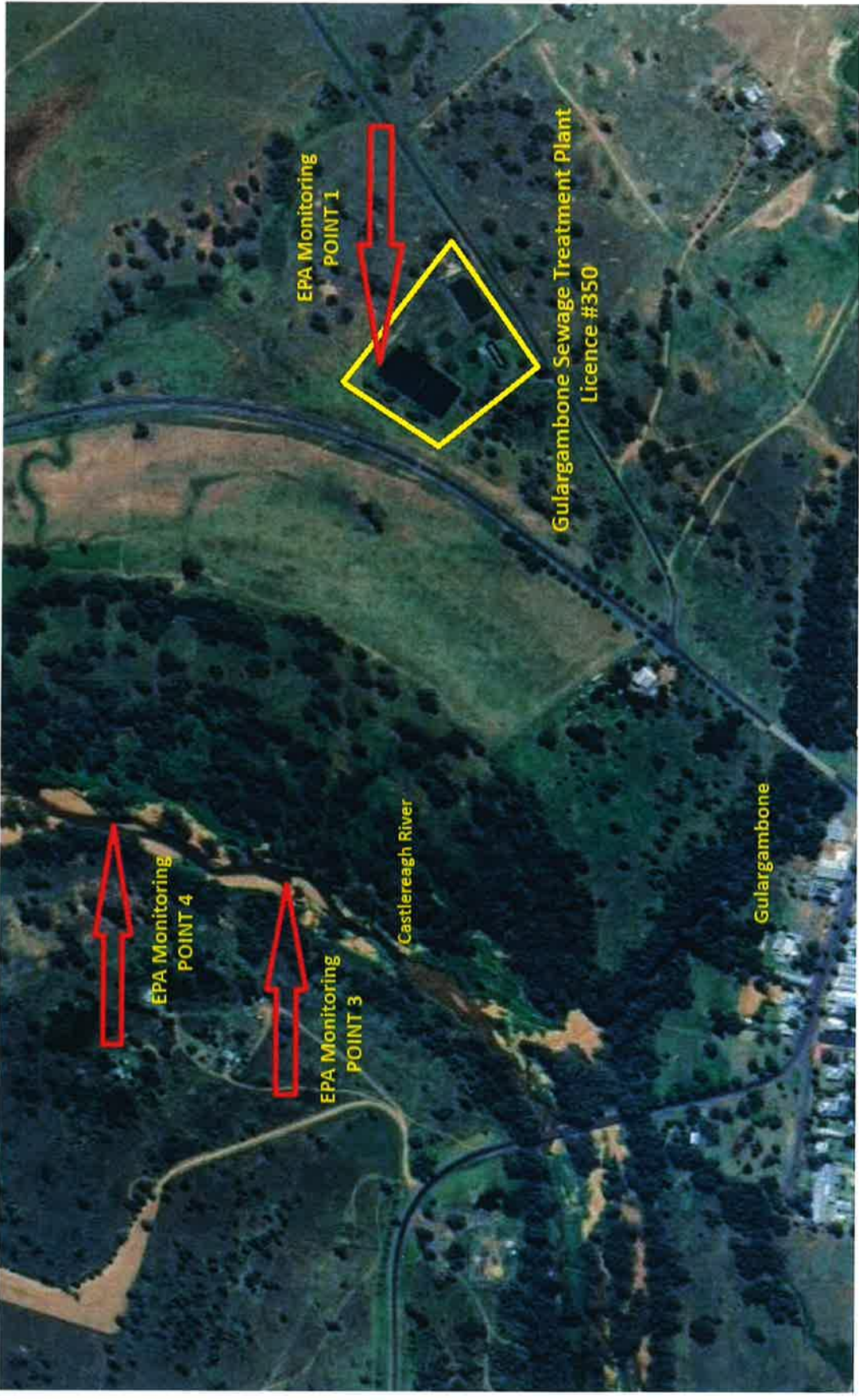
**6. PIRMP Approvals**

<b>Developed/reviewed by:</b>	<b>Position</b>	<b>Date</b>	<b>Signature</b>
Sergei Iagunkov	Manager Water and Sewer	14/12/2023	

<b>Approved by:</b>	<b>Position</b>	<b>Date</b>	<b>Signature</b>
Kerrie Murphy	Director Infrastructure	14/12/2023	

**Appendix A – Maps**

**Map 1. Gulgambone locality.**





Map 2. Gulargambone Sewer Treatment Plant features.

