



**Cabonne Council**  
Canowindra Sewage Treatment Plant  
Pollution Incident Response Management Plan

May 2020

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# 1. Background

## 1.1 Sewerage operations

Cabonne Council (Council) operates a sewerage scheme at Canowindra that operates under Environment Protection Licence (EPL) 1750. EPL 1750 is issued under Section 55 of the *Protection of the Environment Operations Act 1997* by the NSW Environment Protection Authority (EPA).

### 1.1.1 Canowindra sewage treatment scheme

The original scheme at Canowindra was commissioned in 1968. Additions to the scheme were undertaken in recent years for sewerage extension to South Canowindra and outlying parts of North Canowindra. The scheme consists of:

- Four pumping stations
- 17 km of mains
- A sewage treatment plant (STP) located west of Canowindra off Wenz Lane
- Two large storage ponds, and
- An effluent irrigation system, which supplies recycled water to the Canowindra Oval and the Canowindra Golf Course.

At the STP, sewage is treated through with primary settlement and trickling filters before final polishing in oxidation and maturation ponds. The effluent is then stored in ponds before chlorination and reuse on the playing fields. When irrigation is not required and the storages are full, the effluent is discharged to the Belubula River.

## 1.2 PIRMP purpose

The EPL contains a requirement to report pollution incidents as outlined in Section 6, Reporting conditions:

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 EPA Environment Line on 131 555.
- R2.2 The licensee must provide written details of the notification to the EPA within seven days of the date on which the incident occurred.

## **2. Pollution Incident Response Planning**

### **2.1 Risk assessment**

The risk assessment was reviewed on site between GHD and site personnel during testing of the PIRMP on 1 August 2019. The main hazards identified and control measures to minimise the occurrence and consequences (people and environment) of the identified risks are outlined in Table 2-1.

**Table 2-1 Hazards**

Location	Hazard	Control Measure/s	Consequence	Likelihood of material harm	Escalating Factors
STP	Insufficient treatment – wet weather overflow	<ul style="list-style-type: none"> <li>UV disinfection at the Golf Course and Sporting field</li> <li>Daily site risk assessments</li> <li>Incident response procedures</li> <li>On site water quality analysis</li> <li>Dilution from infiltration throughout the sewer network and creek flows</li> </ul>	<ul style="list-style-type: none"> <li>Pollution of downstream waterbody</li> </ul>	Low	<ul style="list-style-type: none"> <li>Significant rainfall event</li> <li>Large volume trade waste discharge</li> <li>Plant malfunction</li> </ul>
	Spill of chemicals / fuels / oils	<ul style="list-style-type: none"> <li>Staff training in use</li> <li>Appropriate storage</li> <li>Small quantities of chemicals / fuels / oils stored</li> </ul>	<ul style="list-style-type: none"> <li>Localised soil contamination</li> </ul>	Low	<ul style="list-style-type: none"> <li>Inappropriate storage of chemicals / fuels / oils</li> <li>Use of chemicals / fuels / oils by untrained staff</li> </ul>
	Spill of untreated sewage to land – wet weather overflow	<ul style="list-style-type: none"> <li>Staff on call</li> <li>Maintain equipment for sewage clean up and unblocking sewers</li> </ul>	<ul style="list-style-type: none"> <li>Localised soil contamination</li> </ul>	Low	<ul style="list-style-type: none"> <li>Significant rainfall event</li> <li>Large volume trade waste discharge</li> </ul>
Sewer reticulation network	Spill of untreated sewage to land – sewer choke	<ul style="list-style-type: none"> <li>24hr Customer Service</li> <li>Staff on call</li> <li>Maintain equipment for sewage clean up and unblocking sewers</li> </ul>	<ul style="list-style-type: none"> <li>Localised soil contamination</li> <li>Community contact with untreated sewage</li> <li>Discharge of untreated sewage to waterways</li> </ul>	Low	<ul style="list-style-type: none"> <li>Increase in solids content of sewage</li> <li>Unauthorised material discharged to sewer network</li> <li>Proximity of sewer choke to sensitive receptors</li> </ul>
	Spill of untreated sewage to land – pump station failure	<ul style="list-style-type: none"> <li>Regular inspections</li> <li>24hr Customer Service</li> <li>Staff on call</li> </ul>	<ul style="list-style-type: none"> <li>Localised soil contamination</li> <li>Community contact with untreated sewage</li> <li>Discharge of untreated sewage to waterways</li> </ul>	Low	<ul style="list-style-type: none"> <li>Increase in solids content of sewage</li> <li>Unauthorised material discharged to sewer network</li> </ul>

## **2.2 Potential pollutants and safety equipment**

A number of potential pollutants are stored, used and disposed of at the Canowindra STP for operational activities. These include chemicals, fuels, oils, lubricants, cement, lime, and treated and untreated sewage.

A range of safety equipment and alarms are maintained at the Canowindra STP and throughout the sewer network for use during emergencies.

Details of potential pollutants and safety equipment are provided in Table 2-2. The location of the items listed is shown on the maps in Appendix B.

**Table 2-2 Inventory of pollutants and safety equipment**

Location	Potential Pollutant	Maximum Quantity	Storage	Safety Equipment and Devices	Alarms
Pump stations	Sewage	Site specific	N/A	<ul style="list-style-type: none"> <li>Standby pumps</li> <li>Bunds</li> </ul>	<ul style="list-style-type: none"> <li>High level alarms connected to telemetry</li> </ul>
Sewer reticulation network	Sewage	Site specific	N/A	N/A	Nil
Canowindra STP	Sewage	ADWF 600 kL/day (approx.)	N/A	<ul style="list-style-type: none"> <li>Rubber gloves</li> <li>Face masks</li> <li>Firefighting equipment</li> <li>SDSs</li> <li>First aid kit</li> <li>Signage</li> <li>PPE including ear protection, hard hats, ear plugs, appropriate footwear, high vis vests</li> </ul>	Nil
	Fuel	20 L	Operations building		
	Roundup	0.5 L			
	Hydrate lime	40 kg			
	Disinfectant	5 L			
Oils	20 L				



## 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 B.

- Canowindra locality map
- Canowindra STP features map.

## 2.4 Notifiable Incidents

### 2.4.1 POEO Act Definitions

A pollution incident is defined by the POEO Act 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 is defined by the POEO Act as:

*(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 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.*

Licensed facilities are required to report pollution incidents immediately to the EPA, NSW Health, Fire and Rescue NSW, WorkCover NSW and the local council. 'Immediately' has its ordinary dictionary meaning of promptly and without delay.

# 3. Incident response

## 3.1 Immediate notification incident

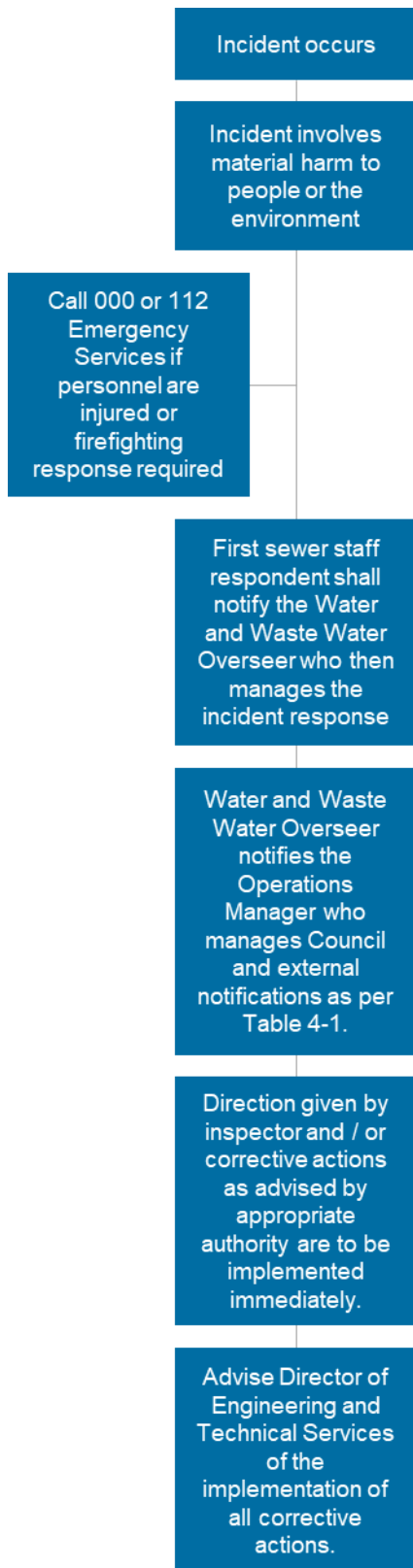
### 3.1.1 Incident response and notification

As per the definition of an immediate notification incident in section 2.4.1 and resulting from the risk assessment in Table 2-1, Council have identified the following incidents related to their sewer operations that require immediate notification:

- Pump station failure resulting in overflow to a waterway
- Sewer choke resulting in an overflow to a waterway.

Council's procedures for responding to a potential Sewer Operations immediate notification incident are outlined in Figure 3-1.

Contact details for Council personnel and external agencies requiring notification is provided in Table 3-1 and Table 3-2.



**Figure 3-1 Sewer Operations Incident Response Flowchart**

**Table 3-1 Incident Contact Details – Council**

Name	Position	Contact Number
Ross Menzies	Water & Waste Water Overseer	0428 091 673
Chris Jackson	Urban Services Coordinator	0417 273 294
Michelle Murphy	Operations Manager – Urban Services & Utilities	0437 295 896

**Table 3-2 Incident Contact Details – External**

Organisation	Contact Number
Emergency Services	000
NSW EPA	131 555
SafeWork NSW	131 050
Essential Energy	132 080
NSW Health – Bathurst Public Health Unit	(02) 6330 5880 0428 400 526

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

- On Call Supervisor is responsible for actioning initial response to the incident.
- Water & Waste Water Overseer is responsible for managing the incident response.
- Operations Manager is responsible for notifying external authorities, potentially affected community and ensuring adequate resources are available for incident response.

The Operations Manager shall determine the most appropriate means of contacting potentially affected community including:

- Door knocking
- Letterbox drops
- Phone
- Local media
- Social media
- Signage.

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

- Description of the incident
- Status of incident
- Response actions
- Actions to minimise harm
- Likely duration.

As per EPL 1750, the licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

## **3.2 General incident**

### **3.2.1 Sewer operations**

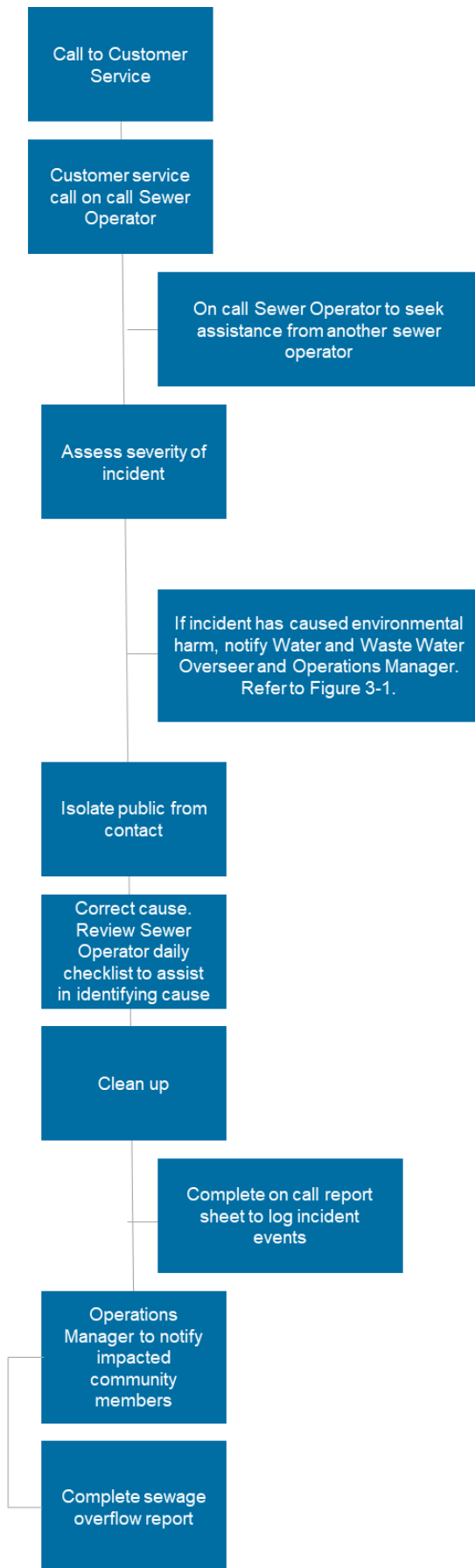
Council maintain incident response procedures for other potential incidents throughout the sewer network including:

- Sewer choke – Figure 3-2
- Pump station failure – Figure 3-3
- STP overflow – Figure 3-4.

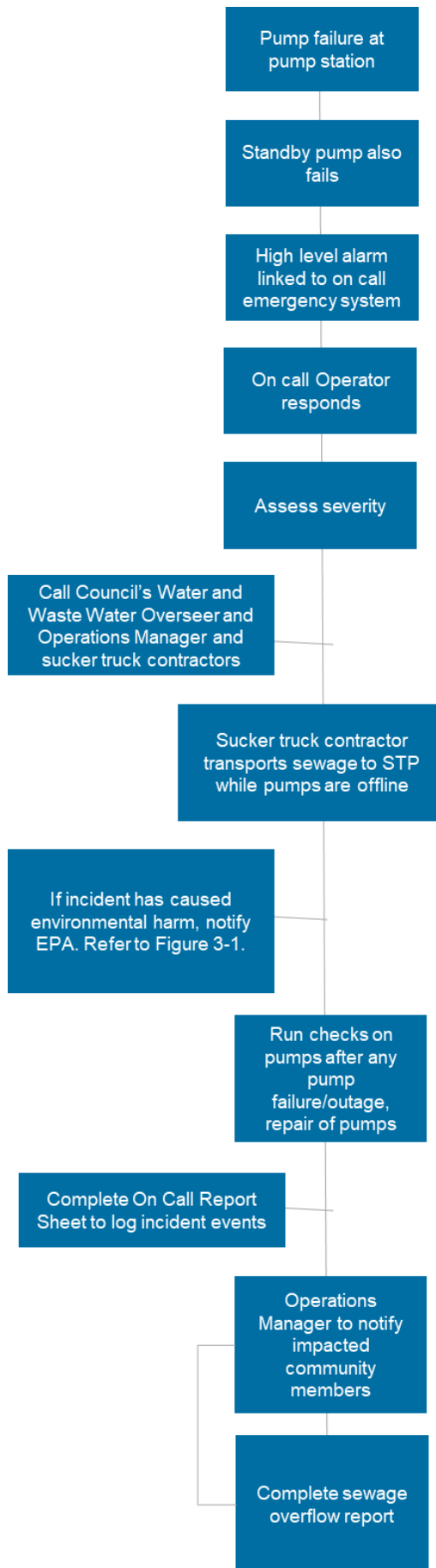
The EPL requires details of the incidents be recorded as per the Sewage Overflow Reports (Appendix A) and maintained by Council.

Where there is an observed or reported overflow from the reticulation system or where sewage or partially treated sewage is discharged from the premises as a result of a bypass of the treatment system and this overflow or bypass has the potential to impact on human or environmental health, the licensee is to promptly give appropriate notification to any parties that are likely to be affected, including:

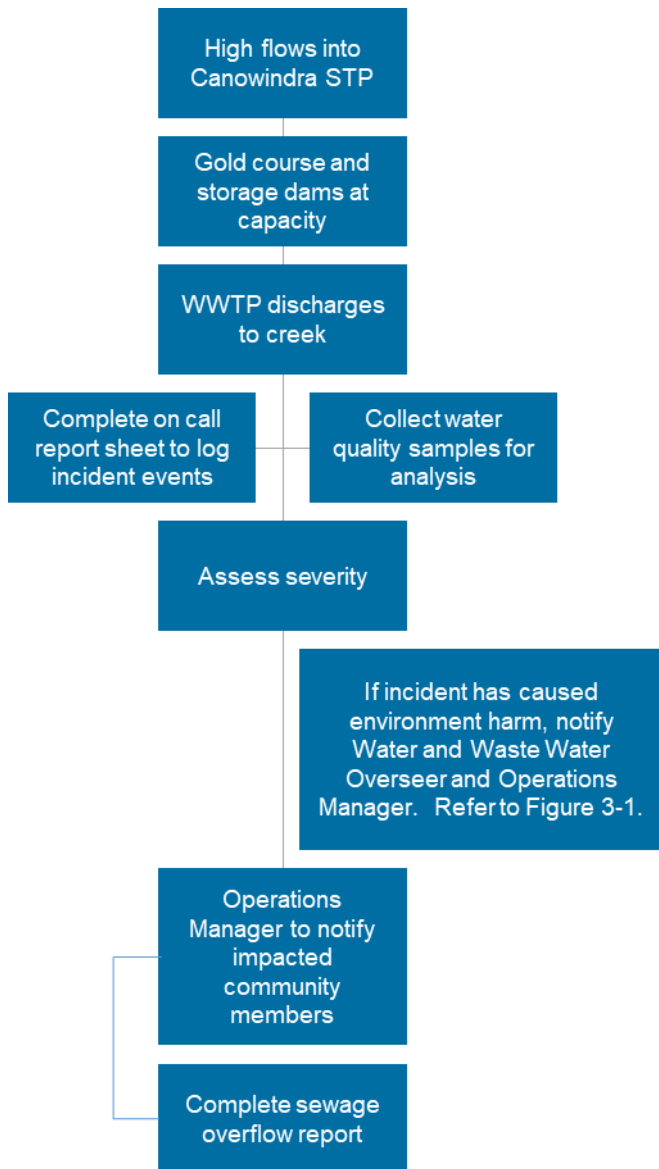
- The affected community
- NSW Health and any other relevant authority in accordance with condition R2.1
- Any other parties as identified in, and in accordance with, the Incident Notification Procedures (protocol) submitted to the EPA in a letter from the licensee dated 8 October 2004, or subsequent approved variation/s to this protocol as updated from time to time.



**Figure 3-2 Incident Response – Sewer choke**



**Figure 3-3 Incident Response – Pump station failure**



**Figure 3-4 Incident Response – Canowindra STP overflow**



# 4. Training and review

## 4.1 Training

Personnel involved in sewage 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 training and testing of the PIRMP is provided in Table 4-1.

**Table 4-1 Incident Response Training**

Type of Training	Personnel Involved	Frequency	Records
Overflow clean up	New Sewer staff	On-the-job for first 6 months prior to going on the On Call roster	Nil
NSW Officer of Water Part 1 – Water Treatment Operations	Sewer Operators	Once	Human Resources
NSW Officer of Water Part 2 – Advanced Treatment	Sewer Operators	Once	Human Resources
Confined space	Sewer staff	As required by training provider	Human Resources
Toolbox meetings	Sewer staff	Fortnightly	Minutes
PIRMP test	Relevant Sewer staff	Annual	Minutes
Incident debrief	Personnel involved in incident Independent chair	Within one month of an incident	Minutes

## 4.2 PIRMP Review

The guidelines require the PIRMP to be reviewed annually. The PIRMP will be updated when there is a material change to operations including but not limited to:

- Modification of EPL 1750
- Changes in standard operating procedures referred to in this PIRMP
- Completion of Water Quality Management Plan risk assessment for licensed sites
- Change in legislative requirements
- Recommendations arising from an incident debrief emergency drill or emergency simulation exercise.

The responsibility for reviewing the PIRMP is the Operations Manager (Urban Services and Utilities).

Records of PIRMP review and testing is provided in Table 4-2.

An update of the PIRMP would trigger all staff to undergo refresher training as part of toolbox meetings as per Table 4-1.

**Table 4-2 PIRMP review and test**

Issue	Date	Reviewed by	Description
<b>PIRMP Review</b>			
1	August 2012	Council Sewer personnel GHD	Initial document prepared to meet the PIRMP guidelines
2	August 2019	Council Sewer personnel GHD	Create a separate PIRMP for the Canowindra Sewage Treatment Scheme Removal of references to transferred EPLs General PIRMP update
3	March 2020	Council Sewer personnel GHD	General PIRMP update Revision of Incident Response flow charts
<b>PIRMP Testing</b>			
1	1 August 2019	Council Sewer personnel GHD	PIRMP desktop scenario test with Sewer personnel
2	March 2020	Council Sewer personnel GHD	PIRMP desktop scenario test with Sewer personnel

## **5. Disclaimer**

This report has been prepared by GHD for Cabonne Council and may only be used and relied on by Cabonne Council for the purpose agreed between GHD and the Cabonne Council as set out in section 1.2 of this report.

GHD otherwise disclaims responsibility to any person other than Cabonne Council arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

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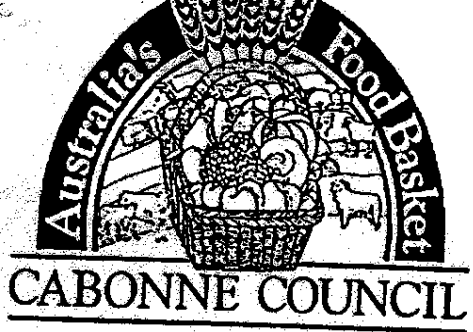
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## **Appendices**

# **Appendix A** – Incident Reporting Forms



# CANOWINDRA SEWERAGE SCHEME

## SEWERAGE OVERFLOW REPORT

This form is to be completed by the Duty Operator in the event of sewerage surcharge to the Belubula River or surcharge from the system.

### 1. Surcharge to the Belubula River

- Location.....  
.....
- Cause of Surcharge.....  
.....  
.....
- Action taken to stop surcharge.....  
.....  
.....  
.....
- Estimated duration & quantity: Time:..... Quantity:.....
- Clean up action taken.....
- Sample taken; one downstream & one upstream of surcharge.....  
..... Time:.....
- Sample sent to:.....  
.....

Samples to be tested for dissolved oxygen, pH, P, N, chlorophyll-a, turbidity and faecal bacteria.

2. Surcharge from System

- Location.....  
.....  
.....
- Cause of surcharge.....  
.....  
.....
- Action taken to stop surcharge.....  
.....  
.....
- Estimated duration of surcharge.....
- Clean up action taken.....
- Visual Assessment of – BOD & Suspended Solids.....  
OR  
Sample taken and forwarded for testing YES/NO

Reported By..... Date:.....

Report received and entered in database by:.....

Date:.....

Test results received and entered in database by:.....

Date:.....

---

Any further Action Required?.....

.....

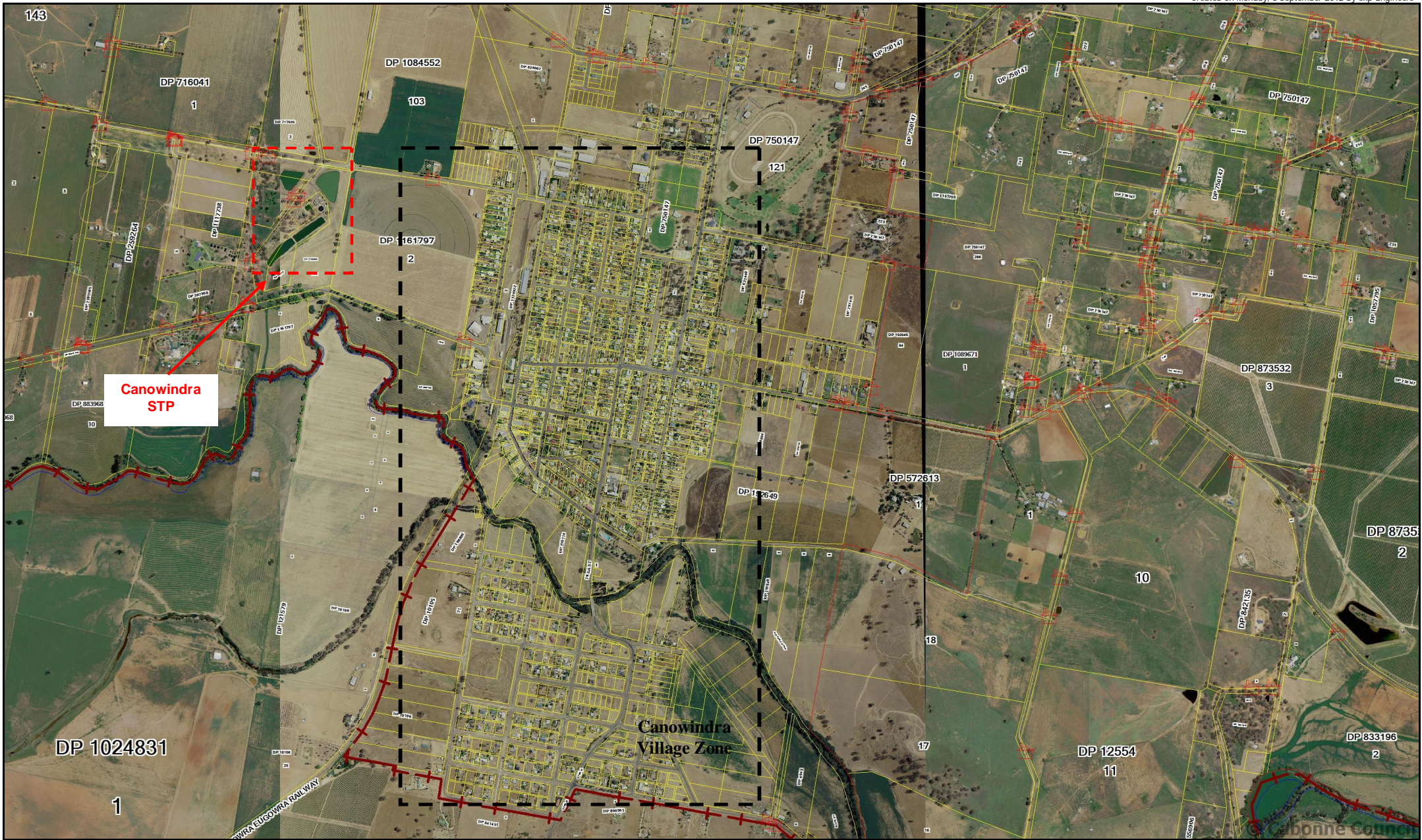
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Services & Development Engineer

Date:.....

## **Appendix B** - Maps





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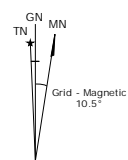
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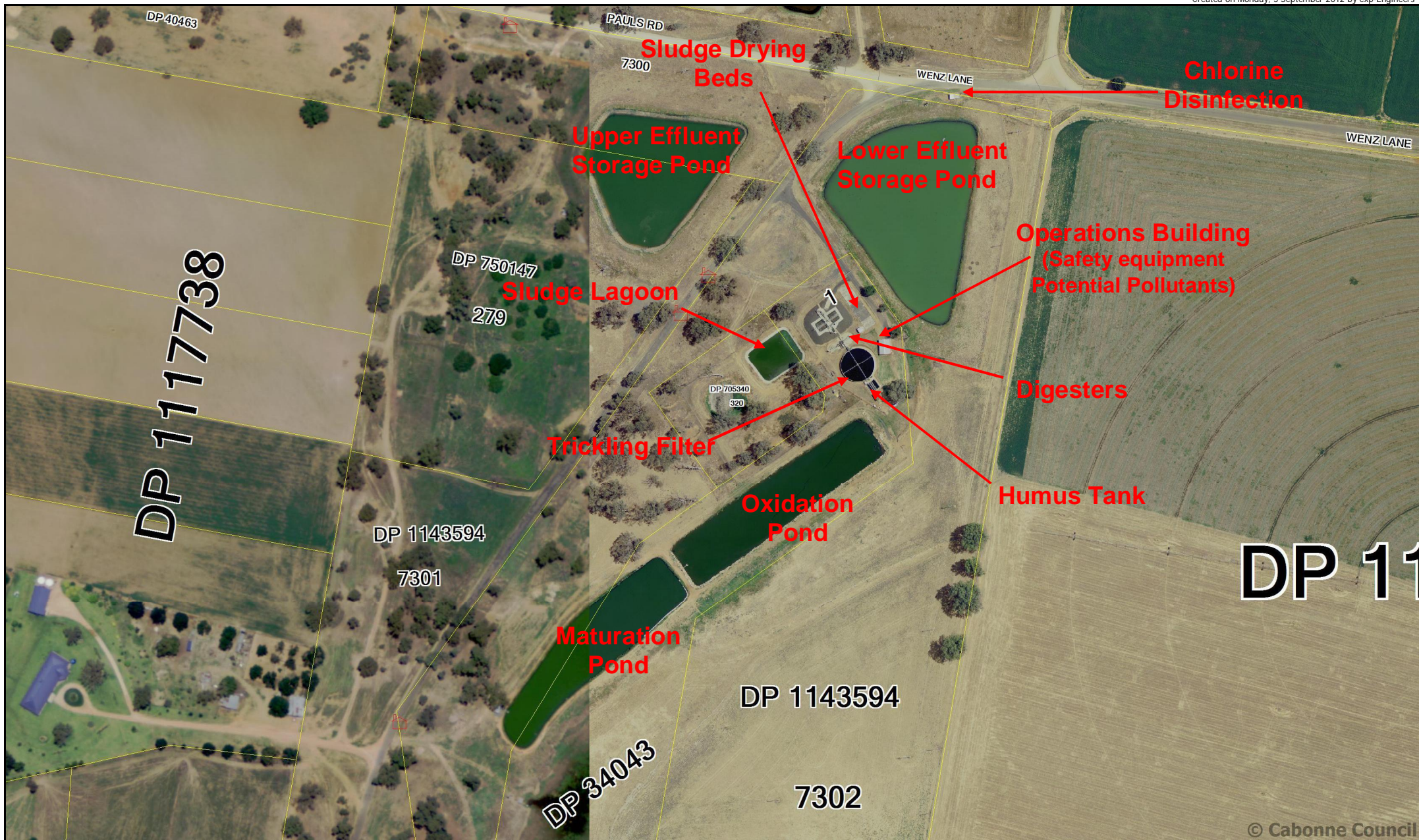
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Date: Monday, 3 September 2012

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**Canowindra**

Map Scale: 1:20,830 at A4  
 Map Zoom: 5913 m



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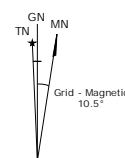
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Aerial Photography:

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**Canowindra STP**

Map Scale: 1:3,166 at A4  
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Document Status

Revision	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
0	B Foster	D Scott	<i>*D Scott</i>	D Mees	<i>*D Mees</i>	3/09/2019
1	G Rogers	D Scott	<i>D Scott</i>	D Mees	<i>D Mees</i>	20/05/2020

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