

Gilgandra Shire Council



Pollution Incident Response Management Plan

Gilgandra Shire Council

2 August 2022

→ **The Power of Commitment**



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GHD Pty Ltd | ABN 39 008 488 373

270 Summer Street,

Orange, New South Wales 2800, Australia

T +61 2 6393 6400 | **F** +61 2 9475 0725 | **E** oagmail@ghd.com | **ghd.com**

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Contents

1. Introduction	1
1.1 Sewage treatment plant	1
1.2 PIRMP purpose	1
1.3 Availability	1
2. Pollution incident response planning	2
2.1 Risk assessment	2
2.2 Potential pollutants and safety equipment	5
2.3 Maps	5
2.4 Notifiable incidents	6
2.4.1 POEO Act definitions	6
3. Incident response	7
3.1 Immediate notification incident	7
3.1.1 Incident response and notification	7
3.1.2 Responsibilities	9
3.1.3 Community notifications	10
3.1.4 Coordination with external agencies	10
3.2 General incident	11
3.2.1 Sewer operations	11
4. Training and review	13
4.1 Training	13
4.2 PIRMP testing	13
4.3 PIRMP review	14
5. Disclaimer	15

Table index

Table 2.1	Hazards	3
Table 2.2	Inventory of Pollutants and Safety Equipment	5
Table 3.1	Incident contact details – Council	7
Table 3.2	Incident management roles and responsibilities	9
Table 3.3	Incident contact details – Relevant authorities	9
Table 4.1	Training	13

Figure index

Figure 3.1	Incident response flowchart	8
Figure 3.2	Incident response flowchart – sewer choke	12

Appendices

Appendix A	Maps
Appendix B	Risk Minimising Procedures
Appendix C	PIRMP Registers

1. Introduction

1.1 Sewage treatment plant

Gilgandra Shire Council (Council) operates the Gilgandra sewage treatment plant (STP) for the township of Gilgandra NSW. Wastewater from the town is conveyed through a sewerage system to the STP located to the north of the town. The STP is a trickling filter plant with added UV treatment. The STP operates as a no-release site with treated effluent reused on a neighbouring property 'Bowenleigh'.

The STP operates under EPL 4640 which is issued under Section 55 of the *Protection of the Environment Operations Act 1997* by the NSW Environment Protection Authority (EPA).

1.2 PIRMP purpose

Part 5.7A of the POEO Act requires all holders of an environment protection licence (EPL) to prepare, keep, test, and implement a Pollution Incident Response Management Plan (PIRMP).

The objectives of the plan are to:

- Minimise and control the risk of a pollution incident at the facility.
- Ensure comprehensive and timely communication about a pollution incident to all stakeholders.
- Ensure staff are properly trained in the plan so that it is properly implemented and maintained.

The requirements to report material harm under Part 5.7 of the Act applies to all activities whether an EPL is in force or not.

1.3 Availability

A hard copy of this document will be kept at the Gilgandra STP and the Council Office. A copy of the response flow charts, and tables of contact details will be kept in relevant vehicles. A public version of the PIRMP will be published on Council's web site accessible at <https://www.gilgandra.nsw.gov.au/Live/Water-Sewer/Sewer>.

An electronic version will be kept in the S:\Infrastructure\Water and Sewer\Sewer\PIRMP

2. Pollution incident response planning

2.1 Risk assessment

Risk assessments were conducted on site between GHD and site personnel during site visits in November 2012 and revised in March 2022. 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 2.1.

Table 2.1 Hazards

Location	Hazard	Escalating Factors	Consequence	Likelihood of Material Harm	Pre-emptive Measures
STP	Insufficient treatment – wet weather overflow	Significant rainfall event Flood event Plant malfunction Pivot malfunction	Pollution of downstream water body	Low	Irrigation of effluent Storage capacity at STP and 'Bowenleigh' Ability to contain spills at STP Quarterly effluent quality monitoring Residence time in ponds
	Flooding	Heavy rains, storms, climate change increasing intensity of storms and floods Power failure	Untreated sewage release into environment, Castlereagh River	Medium	Plant built above 1%RI level Monitor weather Preventative maintenance
	Power failure	Heavy rain Lightning	Untreated sewage release into environment, Castlereagh River	Medium	Awareness of scheduled outages Monitor weather Preventative maintenance
	Plant malfunction	Heavy rain Power failure Lightning	Untreated sewage release into environment, Castlereagh River	Medium	Inspections of infrastructure integrity Preventative maintenance Monitor weather
	Operator error/ or unavailable to carry out processes	Staff unavailable – leave, work restrictions, illness, public health orders, flood access Call out for other network issues Heavy rain	Untreated sewage release into environment, Castlereagh River	Low	Managing roster, pandemic response included separating teams and key workers Checklists for processes and procedures

Location	Hazard	Escalating Factors	Consequence	Likelihood of Material Harm	Pre-emptive Measures
Sewer reticulation network	Spill of untreated sewage to land – sewer choke	<ul style="list-style-type: none"> Unauthorised material discharged to sewer network Ageing pipeline network Plant debris (roots) entering pipes Heavy rain / storms Surcharge located in public areas 	<ul style="list-style-type: none"> Localised soil contamination Community contact with untreated sewage 	Low	<ul style="list-style-type: none"> Council Customer Service Staff on call 24hr Maintain equipment for sewage clean up and unblocking sewers Council trucks available for pump out Sewer relining program Infiltration rectification program
	Spill of untreated sewage – pump station failure	<ul style="list-style-type: none"> Unauthorised material discharged to sewer network Significant rainfall event Failure of SCADA Power outage SPS located in public area 	<ul style="list-style-type: none"> Localised soil contamination Community contact with untreated sewage Pollution of downstream water body 	Moderate	<ul style="list-style-type: none"> Council Customer Service Staff on call 24hr Pump stations connected to telemetry Standby pumps in all pump stations Council trucks available for pump out Response trailer with bunding, pump and tank available at SPS1. 2 water trucks and pump available from Roads Operations team Infiltration rectification program
	Spill of untreated sewage – failure of rising main	<ul style="list-style-type: none"> Heavy rain / storms Rising main located in public areas Tree roots 	<ul style="list-style-type: none"> Community contact with untreated sewage Pollution of downstream water body 	Moderate	<ul style="list-style-type: none"> Sewer relining program Infiltration rectification program Inspections of rising main integrity

2.2 Potential pollutants and safety equipment

The only potential pollutant stored at the STP and throughout the sewer network is the untreated sewage. All fuels, oils and chemicals required for sewer operations are stored at Council's depot in Gilgandra.

A range of safety equipment and alarms are maintained for use during emergencies. In addition, all Water and Sewer staff are vaccinated against potential diseases associated with sewage.

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 A.

Table 2.2 *Inventory of Pollutants and Safety Equipment*

Location	Potential Pollutant	Maximum Quantity	Safety Equipment and devices	Storage	Alarms
STP	Sewage	ADWF 640 kL/day (approx.)	General PPE Shovels, rakes etc. – sewer choke response Gas detector Signage pH meter First aid kit	Water & Sewer staff vehicles STP site shed	SCADA alarms – high level warning and pump failure.
Sewer reticulation network	Sewage	Site specific	N/A	N/A	SCADA alarms – high level warning and pump failure.
Council Depot	-	-	PPE Brooms, shovels and bins – sewer choke response Gas meters Earthmoving equipment Sand, gravel, soil Pumps	All safety equipment and devices are stored at the Council depot	-

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:

- Gilgandra locality map
- STP features map
- Gilgandra sewer infrastructure map showing the drainage catchment to each pump station

The sewer infrastructure map is available at: <M:\Assets\Water and Sewer\Sewer\GSC SewerOverview.pdf>

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.

A pollution incident that causes or threatens material harm must be notified to the relevant authorities.

Examples of material harm include:

- Sewage or effluent overflows in an area that the public cannot easily avoid.
- Raw sewage is discharged to the Castlereagh River or other main waterway.
- Property damage.
- Significant failure of plant and equipment.
- Extensive clean up and site restoration e.g. removal of several loads of liquid or solid waste.

Pollution incidents that only involve odour do not need to be notified.

A breach of licence conditions is not notifiable unless it constitutes a material harm incident.

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, SCADA and backup failure resulting in an overflow from a pump station that reaches a nearby waterway
- Sewer choke resulting in an overflow that reaches a nearby waterway

Council's procedures for responding to a potential immediate notification incident are outlined in Figure 3.1.

Contact details for Council personnel and external agencies requiring notification are provided in Table 3.1 and Table 3.2.

In the event of an incident that meets the Material Harm definition, a worker must contact the Director Infrastructure Services, details in Table 3.1. If the Director cannot be contacted, alternate contacts include the Urban Services Manager or the General Manager.

Table 3.1 Incident contact details – Council

Name	Role	Contact number
Mark Linton-Harland	Urban Services Manager	0438 430 520
Daryl Colwell	Director of Infrastructure Services	0457 707 919
David Neeves	General Manager	0409 832 801
Ben Thoms	Water and Sewer Coordinator	0427 472 709
Brady Watson	Water and Sewer Team Leader	0427 472 854
Ashley Hazleton	Rural Roads Coordinator	0438 649 192
	Roads On-Call	0458 296 220
Council Emergency contact number (after hours)		02 6817 8800

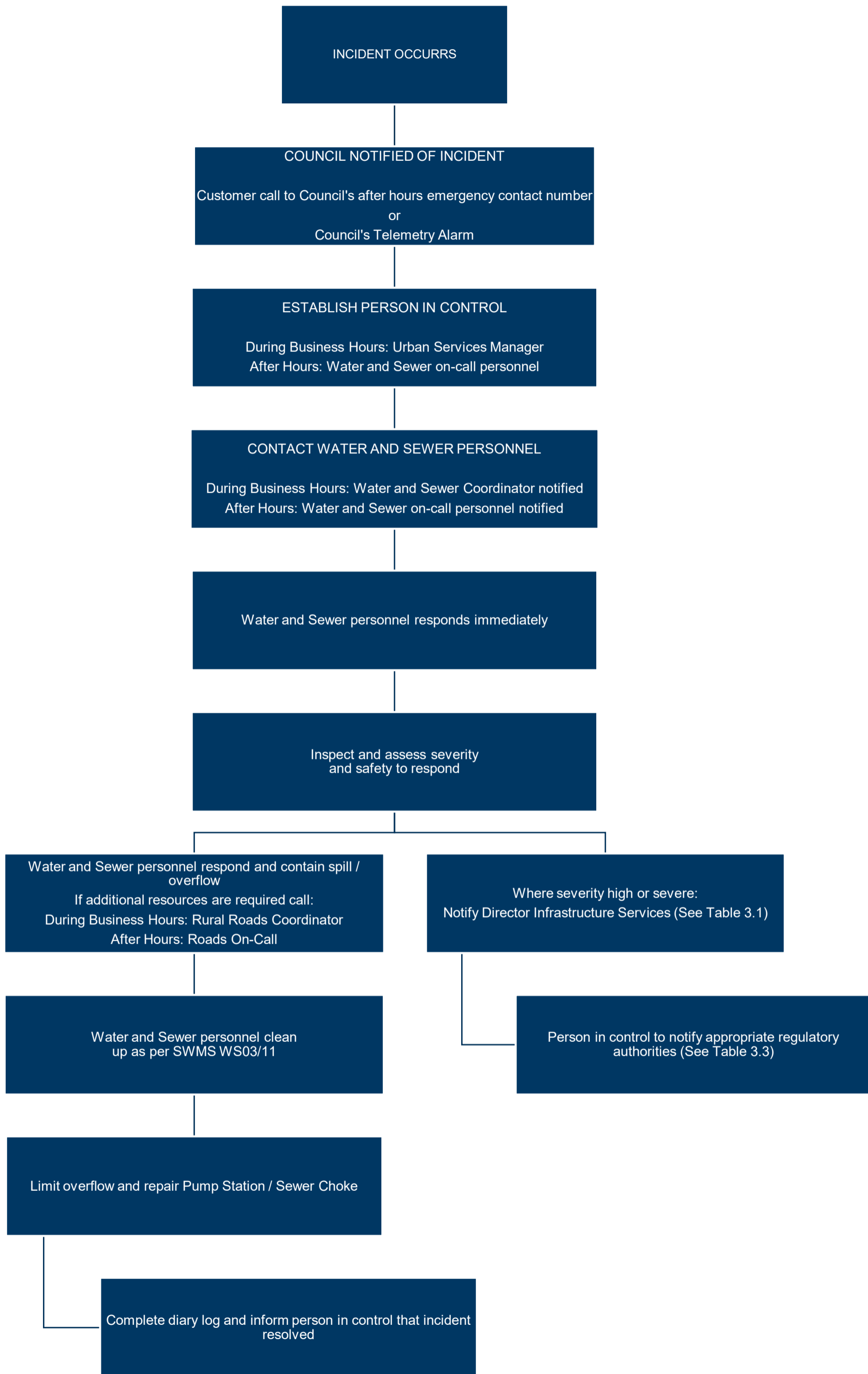


Figure 3.1 Incident response flowchart

3.1.2 Responsibilities

In the event of an immediate notification incident, responsibilities for incident management are as outlined in Table 3.2 and Table 3.3.

Table 3.2 Incident management roles and responsibilities

Roll	Responsibility
Business Hours: Water and Sewer Coordinator	Actioning response, assess severity of the pollution incident Contact Water and Sewer personnel Contact the Rural Roads Coordinator if additional resources are required Actioning the mitigation and correction of the incident Notify members of the public who may be immediately impacted Notifying the Urban Services Manager
After Hours: Water and Sewer on-call personnel	Actioning response, assess severity of the pollution incident Contact the Roads on-call personnel if additional resources are required Actioning the mitigation and correction of the incident Notify members of the public who may be immediately impacted Notifying the Urban Services Manager
General Manager	Liaising with the media
Urban Services Manager	Notifying potentially affected community Ensuring adequate resources are available for incident response Notifying the Director Infrastructure Services in a severe incident Providing a written incident report to NSW EPA within seven days of the PIRMP activation Activating Business Continuity Plan
Director Infrastructure Services	Notifying external authorities Work with General Manager to determine the most appropriate means of contacting potentially affected community including: <ul style="list-style-type: none"> - Door knocking - Letterbox drops - Phone - Local media - Signage

Table 3.3 Incident contact details – Relevant authorities

Role	Contact number
EPA ¹	131 555
NSW Ministry of Health ¹ On Call Public Health Officer Dubbo Regional Office	1300 066 055 Business hours phone: (02) 6809 8979 Fax: (02) 6332 3137 (secure line) After hours phone: (02) 6809 6809 (Dubbo Base Hospital) - ask for Public Health Officer on call, if no answer call mobile: 0418 866 397
WorkCover ¹²	131 050
Fire and Rescue NSW ³	1300 729 579
Australian Rail Track Corporation	02 4902 9410
Transport for NSW	13 22 13

¹ Denotes statutory notification if the incident is deemed to be cause or threaten material harm.

² In many cases a pollution incident will also be a notifiable dangerous incident under the WHS Act.

³ If emergency services are required to attend contact 000.

Information to be provided to relevant authorities:

- Time, date and location
- Where pollution is occurring
- Type of pollution, volume or quality if known
- The cause of the initial incident if known
- Action taken or will be taken if known

As per Part 5.7 of the POEO Act, the licensee must provide written details of the notification to all relevant authorities within seven days of the date on which the incident occurred. The written report must include any relevant information that comes to light after the initial notification.

3.1.3 Community notifications

In the event that an incident has the potential to impact members of the community, the Urban Services Manager is to identify properties neighbouring and affected by the pollution incident. Council would determine the most appropriate method of communication with members of the community such as door knocking, letterbox drops, phone, local media, signage and social media.

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

Measures that may be considered to prevent harm to members of the community include but are not limited to:

- Barricading
- Signage
- Road closures
- No-go areas

3.1.4 Coordination with external agencies

Council should coordinate incident response with emergency services as per the following:

- Access to the rail corridor (20m from the outside track of the rail line) must be coordinated with ARTC. No one may enter the rail corridor unless ARTC safety officer has granted permission.
- Where an incident requires attendance of the NSW&R or RFS, the NSW&R or RFS incident controller will take control of the incident, Council staff will offer advice and assistance as required.
- Where an incident requires Ambulance attendance, Council staff will offer all assistance necessary to enable Ambulance crews to safely attend to the emergency.
- If the EPA attends the incident, the EPA may give a verbal clean up notice to the Council. Such a notice is enforceable, and details of the actions required, and the timeframe should be recorded and communicated the Director of Infrastructure Services. If staff believe the actions or timeframe are unreasonable or can not be met, they should ensure the Director of Infrastructure Services is informed.
- Public health officials should communicate to Council via the Director of Infrastructure Services.

3.2 General incident

3.2.1 Sewer operations

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

- Sewer choke (localised overflow not reaching a waterway).

Figure 3.2 outlines the response and notification procedures for a general sewer choke incident that does not reach a waterway. The EPL requires details of the incidents 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 3.2 Incident response flowchart – sewer choke

4. Training and review

4.1 Training

Personnel involved in water and sewerage 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 Training

Type of Training	Personnel Involved	Frequency	Records
NSW Officer of Water Part 1 – Wastewater Treatment Operations	STP Operators	Once	Human Resources
NSW Officer of Water Part 2 – Advanced Treatment	STP Operators	Once	Human Resources
Induction	New staff	Once	Human Resources
Overflow clean up	All water and sewer staff	On-the-job	Nil
Confined space	Sewer staff	As required by training provider	Human Resources
Toolbox meetings	All water and sewer staff	As required (approximately 3 times per week)	Nil
PIRMP test	All water and sewer staff	Annual Within one month of activating the PIRMP	Minutes
Incident debrief	Personnel involved in incident Independent chair	Within seven days of an incident	Minutes

4.2 PIRMP testing

Testing of the PIRMP is required as identified in Table 4.1. Testing will include as a minimum:

- Confirmation that all names and responsibility and contact numbers are up to date.
- Pre-emptive actions are being undertaken.
- Confirm the PIRMP is in the required places and on the website.
- Confirm all parties are aware of their responsibilities and can exercise those functions in the foreseeable future.
- Confirm the PIRMP is consistent with other relevant policies and procedures.
- Confirm that review triggers listed in Section 4.3 have not been overlooked.

More detailed tests may include:

- Scenario workshop were key staff member review the requirements of the plan and confirm it remains feasible and preferred practice.
- Mock exercise where each responsible person simulates the actions they would take in relevant time frames.

A record of tests completed will be maintained as per the register in Appendix C.

4.3 PIRMP review

The PIRMP will be reviewed when there is a material change to operations including but not limited to:

- Modification of EPL 4640
- Changes in standard operating procedures referred to in this PIRMP
- Change in legislative requirements
- Recommendations arising from an incident debrief, emergency drill or emergency simulation exercise

The responsibility for reviewing the PIRMP is the Urban Services Manager. An update of the PIRMP would trigger all staff to undergo refresher training as part of team toolbox meetings as per Table 4.1.

5. Disclaimer

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

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

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

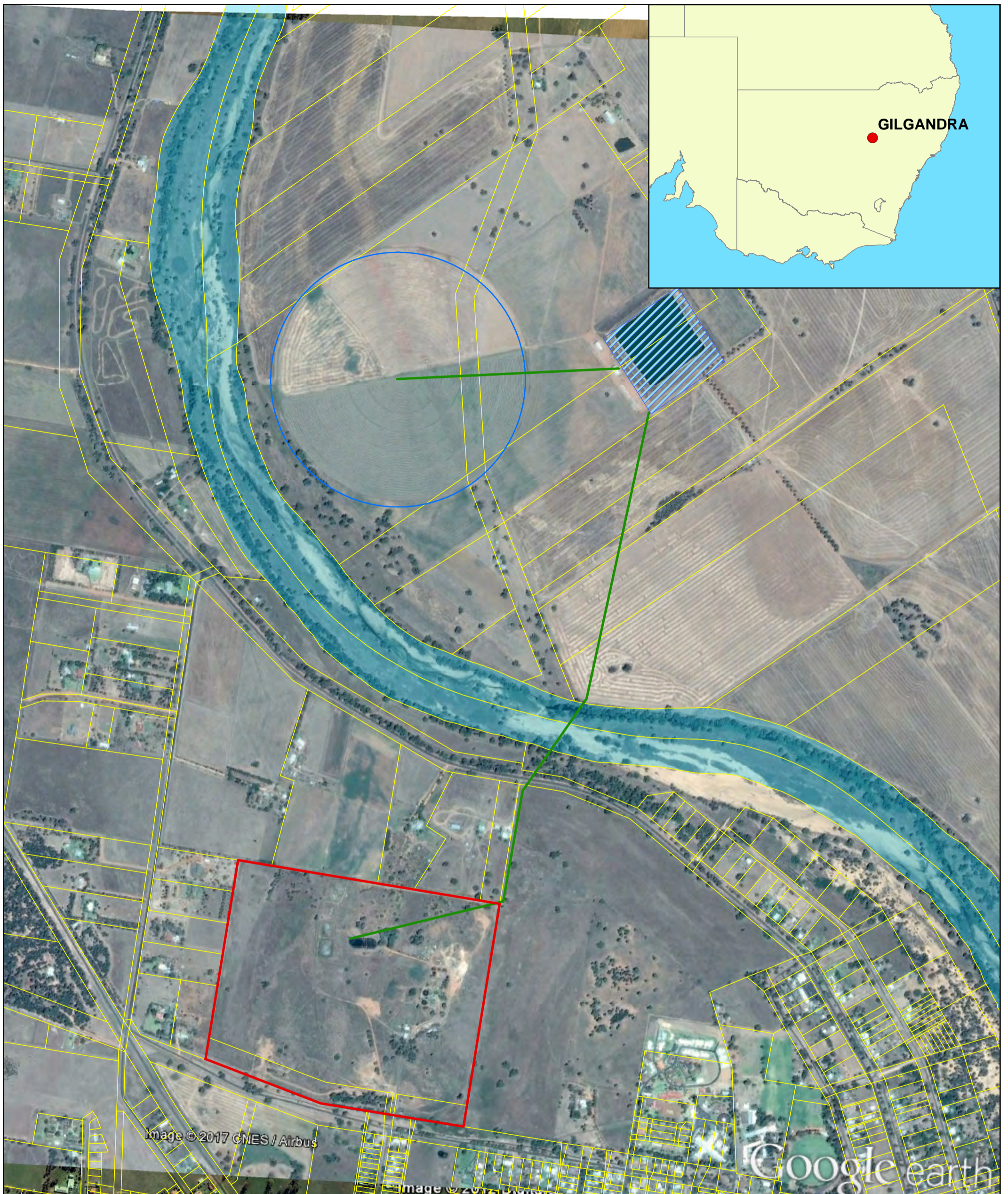
The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described throughout this report. GHD disclaims liability arising from any of the assumptions being incorrect.

Appendices

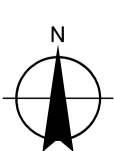
Appendix A

Maps



- LEGEND**
- Site Boundary
 - Castlereagh River
 - Pipes
 - Pivot
 - Dam
 - Cadastre

Paper Size A3
 0 50 100 200 300 400
 Metres



Map Projection: Transverse Mercator
 Horizontal Datum: GDA 1994
 Grid: GDA 1994 MGA Zone 55



Gilgandra Shire Council
 Pollution Incident Response Management Plan

Job Number | 21-20076
 Revision | 1
 Date | 11 May 2017

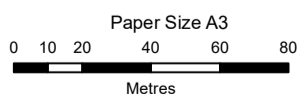
Gilgandra Sewage Treatment Plant Site Locality

Figure 1

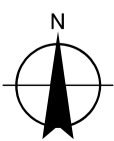


LEGEND

	Site Boundary		PPE and Safety Equipment
	Pipes		Site Features
	Cadastre		Muster Point



Paper Size A3
 Map Projection: Transverse Mercator
 Horizontal Datum: GDA 1994
 Grid: GDA 1994 MGA Zone 55

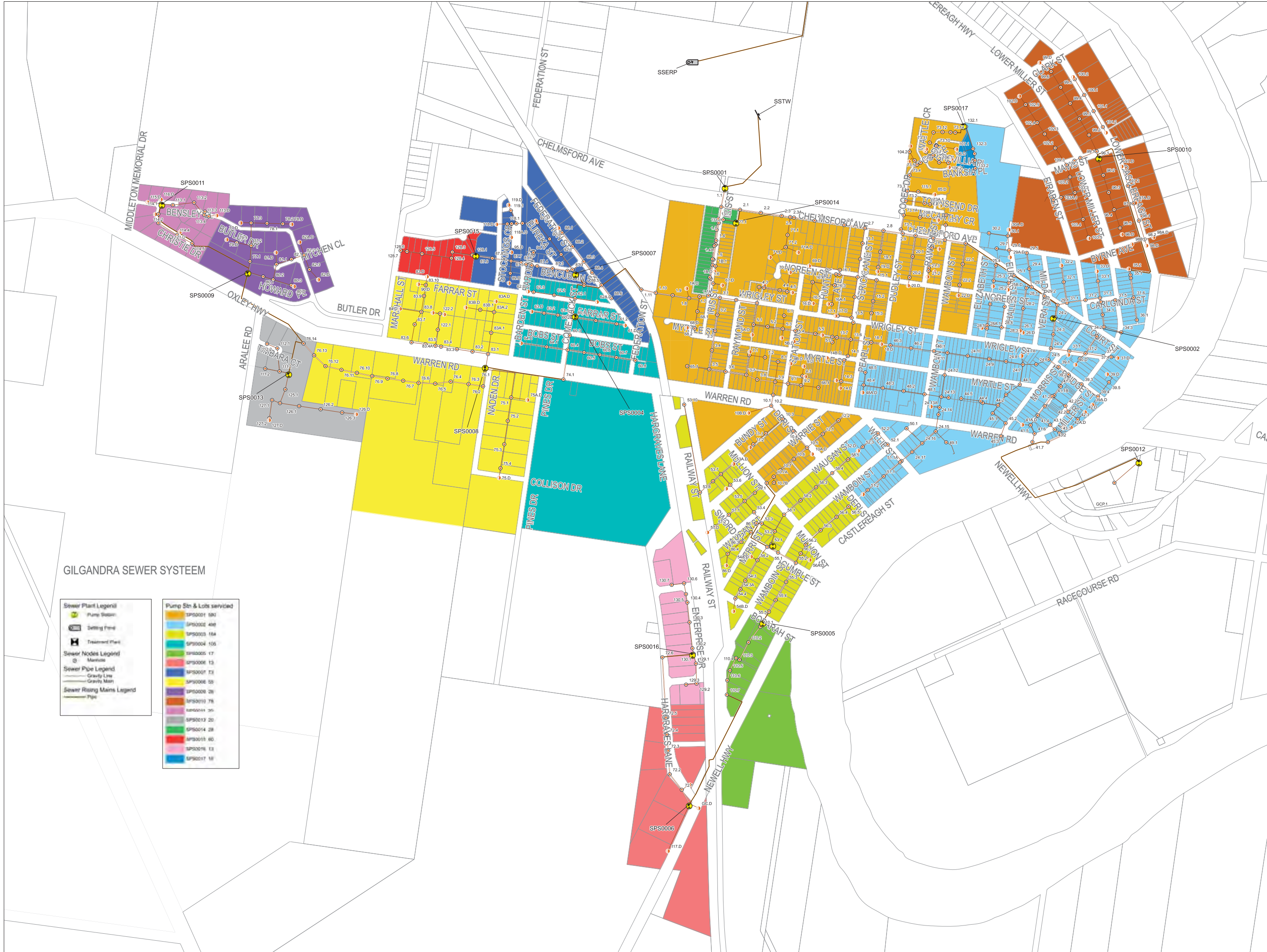


Gilgandra Shire Council
 Pollution Incident Response Management Plan

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Gilgandra Sewage Treatment Plant Site Features

Figure 2



GILGANDRA SEWER SYSTEM

	Pump Station		SPS0001 180
	Setting Pond		SPS0002 480
	Treatment Plant		SPS0003 164
	Manhole		SPS0004 106
	Gravily Line		SPS0005 17
	Gravily Main		SPS0006 13
	Pipe		SPS0007 73
			SPS0008 55
			SPS0009 28
			SPS0010 78
			SPS0011 35
			SPS0012 20
			SPS0013 28
			SPS0014 28
			SPS0015 60
			SPS0016 13
			SPS0017 18

Appendix B

Risk Minimising Procedures

Gilgandra Shire Council maintains the following risk minimising procedures regarding operation of the Gilgandra sewage system:

- Safe Work Method Statement WS03/11 – Clearing Sewer Chokes
- Safe Work Method Statement – Confined Spaces
- Confined Spaces Procedures and Forms

Appendix C

PIRMP Registers

Table C.1 PIRMP Update History

Revision Number	Date	Details of changes	Authorised by		
			Name	Position	Signature
1	2022	Updated risk tables, responsibilities, response flow charts			

Table C.2 PIRMP Annual Test History

Test Date	Test Document Reference	Conducted by		
		Name	Position	Signature
17 March 2022		D Scott, C Flemming	GHD Consulting advisors	



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