



Narromine Shire Council Sewage Schemes

Pollution Incident Response Management Plan

Narromine Shire Council

22 April 2024

→ The Power of Commitment



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1. Introduction

1.1 Sewage treatment plants

Narromine Shire Council (Council) operates a sewage treatment plant (STP) for each of the townships of Narromine and Trangie NSW.

1.1.1 Narromine STP

The STP for Narromine is at the property “Redlands”, Lot 20 DP 616466, owned by Council. The property fronts the Mitchell Highway along its southwestern boundary with rural properties surrounding the remainder of the property.

The Redlands Effluent Irrigation Scheme comprises of:

- A multi-pond oxidation pond type treatment plant sized to accommodate Narromine’s sewerage treatment requirements to a future projected load of 4,000 equivalent persons.
- A 160 ML effluent storage pond to store effluent during periods not suited to irrigation.
- An effluent irrigation system consisting of a pump station drawing from the effluent storage pond to supply a 45 ha centre pivot irrigator.
- A sewer reticulation network consisting of 11 pump stations.

The STP operates under Environment Protection Licence (EPL) 11715 which is issued under Section 55 of the *Protection of the Environment Operations (POEO) Act 1997* by the NSW Environment Protection Authority (EPA).

1.1.2 Trangie STP

The STP for Trangie is northwest of the township of Trangie on Rubbish Tip Road, Lot 1 DP 609209 and Lot 7301 DP 1148668. The property is surrounded by Argonaut Park to the southeast, GrainCorp grain terminal to the west and cropping land to the northeast.

The Trangie sewage scheme comprises of:

- A sewer reticulation network consisting of 11.8 km of gravity main with 201 manholes, and four pump stations with 2.78 km of pressure mains.
- A Pasveer P1000 Aeration channel type treatment plant sized to treat Trangie’s population of 1000 equivalent persons with sludge lagoons and maturation ponds.

The STP is not licensed and discharges effluent into an open channel and adjacent wetland which is located on the Trangie Agricultural Research Station owned by NSW Dept Primary Industry.

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 facilities.
- 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.

This plan is extended to cover the operations of the Trangie STP as it has similar risks of pollution incidents and comes under the same management and control as the Narromine STP. The EPA has not required Council to prepare a PIRMP for the Trangie STP under Section 153B of the POEO Act.

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 Narromine STP, the Trangie STP, the Council Office and Water and Sewer depot. A copy of the response flow charts and tables of contact details will be kept in Water and Sewer vehicles. A public version of the PIRMP will be published on Council's web site accessible at <https://www.narromine.nsw.gov.au/environment/pollution-incident-response-management-plan>

An electronic version will be kept in the CM 9 (Trim System).

2. Pollution Incident Response Planning

2.1 Risk assessment

Risk assessments were conducted on site between GHD and site personnel during site visits in August 2012 and revised in February 2019. 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	Control Measure/s	Consequence	Likelihood of material harm	Escalating Factors
STP	Insufficient treatment – wet weather overflow	Irrigation of effluent Regular inspection of effluent storage pond Quarterly effluent water quality monitoring On site storage capacity (greater than 160 ML) Residence time in ponds	Pollution of downstream waterbody	Low	Significant rainfall event Flood event Plant malfunction Pivot malfunction SCADA failure
	Electrical breakdown	Equipment allows bypass of SCADA and manual operation Electrician contact details available	Loss of alarms and SCADA systems Power failure to pumps and STP treatment processes	Moderate	Significant storm event Availability of electricians
	Spill of chemicals / fuels / oils / trade waste discharge	Staff / farm manager training in chemical use	Localised soil contamination	Low	Inappropriate storage of chemicals / fuels / oils Use of chemicals / fuels / oils by untrained staff
	Electrical fire	Electrics fully enclosed in an electrical switchboard cabinet Isolation procedures Fire alarm	Harm to community and Council personnel Property damage	Low	Nil
	Odour	Location of STP away from sensitive receivers Maintenance and inspection of STP	Nuisance to community and Council personnel	Low	Nil
	Hydrogen Sulphide gas	Maintenance and inspection of the sewer network Remote control of sewer network to manage flows	Harm to Council personnel	Low	Sewage going septic within the network
	Staff unable to attend to daily/weekly operations and conduct manual tasks	Rostering Covid-19 Management Plan	Pollution of downstream water body Localised soil contamination Harm to community	Low	Pandemic Flood event Bush fire Public / school holidays
	Localised flooding	Plant built above local flood planning levels	Pollution of downstream waterbody	Low	Climate change has made flood planning levels less reliable

Location	Hazard	Control Measure/s	Consequence	Likelihood of material harm	Escalating Factors
Sewer collection network	Spill of untreated sewage / trade waste to land – sewer choke	Maintenance and inspection of sewer network 24hr Customer Service Staff on call Maintain equipment for sewage clean up and unblocking sewers SWMS	Localised soil contamination Community contact with untreated sewage/trade waste	Low	Unauthorised material discharged to sewer network Ageing pipeline network Plant debris (roots) entering pipes. Use of “flushable” wipes
	Spill of untreated sewage – pump station failure	Maintenance and inspection of sewer pump stations 24hr Customer Service Staff on call SWMS	Localised soil contamination Community contact with untreated sewage Pollution of downstream waterbody	Moderate	Unauthorised material discharged to sewer network Failure of SCADA Significant rainfall event
	Rising main failure	Testing and relining of rising mains 24hr Customer Service Staff on call SWMS	Localised soil contamination Community contact with untreated sewage Pollution of downstream waterbody	Moderate	Ageing pipeline network Damage to pipeline network during roadworks or other earthworks
	Pump station flooded	SPS built above local flood planning levels	Pollution of downstream waterbody	Low	Climate change has made flood planning levels redundant

2.2 Potential pollutants and safety equipment

No potential pollutants are stored at Council's STP or effluent irrigation farm. All fuels, oils and chemicals required for sewer operations are stored at Council's depot in Narromine.

A range of safety equipment and alarms are maintained 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	Safety Equipment & Devices	Storage	Alarms
Narromine STP	Sewage	ADWF 1000 kL/day (approx.)	PPE Brooms, shovels and bins – sewer choke response Gas meters Signage pH meter First aid kit	All safety equipment and devices are stored in Council trucks	SCADA alarms – high level discharge and pump failure
Narromine sewer collection network	Sewage	Site specific	BA Confined entry equipment Gas meters	N/A	SCADA alarms – pump failure, high level
Trangie STP	Sewage	ADWF 300 kL/day (approx.)	PPE Brooms, shovels and bins – sewer choke response Gas meters Signage pH meter First aid kit	All safety equipment and devices are stored in Council trucks	SCADA alarms – high level discharge and pump failure
Trangie Sewer collection network	Sewage	Site specific	BA Confined entry equipment Gas meters	N/A	SCADA alarms – pump failure, high level
Council depot (Backwater yard)	-	-	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	-
Contractors	-	-	Vacuum truck	On call from Dubbo	-

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:

- Narromine locality map highlighting the area likely to be affected area by overflow of Pump Station No. 1.
- Narromine STP components within the town, likely affected areas, sewage pump stations (SPS) and catchment areas.
- Narromine STP features map.
- Trangie STP locality and SPS catchment areas.

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 Macquarie 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 a licence condition does not need to be notified if it does not constitute material harm.

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 Section 2.1, Council have identified the following incidents related to their sewer operations that require immediate notification:

- Pump station and SCADA failure resulting in sewer overflow.

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 is provided in Table 3.1 and Table 3.2.

Details of the incidents are to be recorded as per the Environmental Incident Report Form (Appendix A) and maintained by Council.

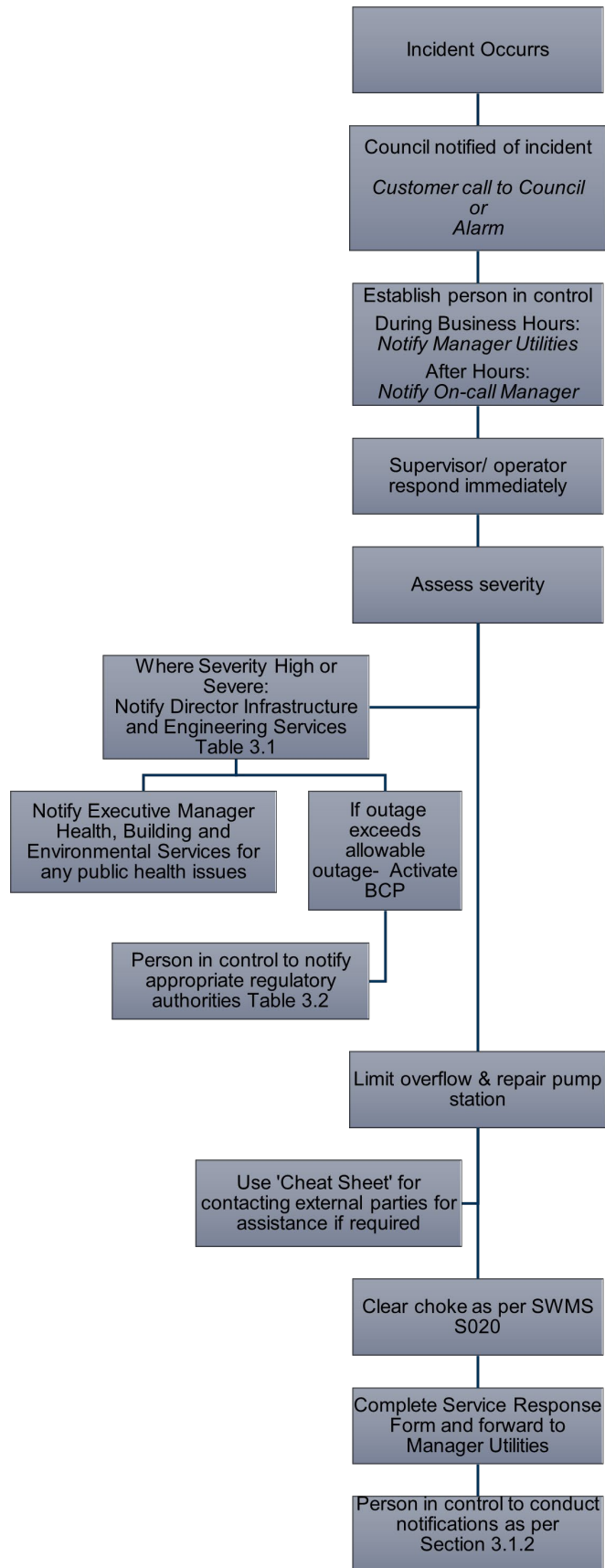


Figure 3.1 Incident response flowchart

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

Table 3.1 Incident contact details – Council

Name	Role	Contact Number
	On Call Manager	02 6889 9999
Council Emergency Contact Number (after hours)		02 6889 9999
Melanie Slimming	Director Infrastructure and Engineering Services	0408 349 301
Doug Moorby	Manager Utilities	0427 221 906
Jane Redden	General Manager	0407 438 422
James Cleasby	Executive Manager Health, Building and Environmental Services	0428 891 322
On Call Operator	Water Operator	0429 185 178
Phil Johnston	Director Community and Economic Development	0427 891 123
David Robbins	Manager Human Resources	0438 764 678
Peter van der Wel	Infrastructure Delivery Manager	0493 885 918
Doug Moorby	Local Emergency Management Officer	0427 221 906

3.1.2 Responsibilities

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

Table 3.2 Incident management roles and responsibilities

Role	Responsibility
On Call Manager	<ul style="list-style-type: none"> Confirm the incident Gather information about the nature and extent of the incident Assess severity of incident and need for assistance and notifications Provide information and advice to Manager Utilities Coordinate on ground response
General Manager	<ul style="list-style-type: none"> Determine community notification priorities Liaise with the media
Manager Utilities	<ul style="list-style-type: none"> Ensuring this plan is followed, reviewed and revised as necessary Ensure adequate resources are available for incident response Call for necessary assistance Liaise with agencies Determine clean up and restoration requirements Prepare debrief, incident report, corrective actions Provide a written incident report to Relevant Authorities within seven days of the PIRMP activation
Director Infrastructure and Engineering Services	<ul style="list-style-type: none"> Make necessary notifications Escalate to General Manager/Councillors where required Determine community notification requirements with General Manager Activate Business Continuity Plan Coordinate media releases with Communications Manager and General Manager
On Call Operator	<ul style="list-style-type: none"> Respond to the incident as per the On Call Manager's direction Assess severity of the pollution incident and inform person in control Action the mitigation and correction of the incident
Executive Manager Health, Building and Environmental Services	<ul style="list-style-type: none"> Back up support for more significant incidents

Table 3.3 Incident contact details – relevant authorities

Organisation	Contact Number
Emergency Services (only if emergency assistance is required)	000
EPA ¹	131 555
NSW Ministry of Health ¹	1300 066 055
On Call Public Health Officer Dubbo Regional Office	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 ¹³	1300 729 579
Australian Rail Track Corporation	02 4902 9410

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.

Part 5.7 of the POEO Act requires that written details of the incident be provided 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 Manager Utilities is to identify properties neighbouring and affected by the pollution incident. The General Manager has authority to approve notifications to the community including media releases. 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

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.

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

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.
- The Department of Health.
- Other parties as identified in, and in accordance with, the OEMP dated April 2017.

In the event of a pollution incident, Council will respond to the incident as per the actions in Section 3 and Figure 3.2.

Details of the incidents are to be recorded as per the Environmental Incident Report Form (Appendix A) and maintained by Council.

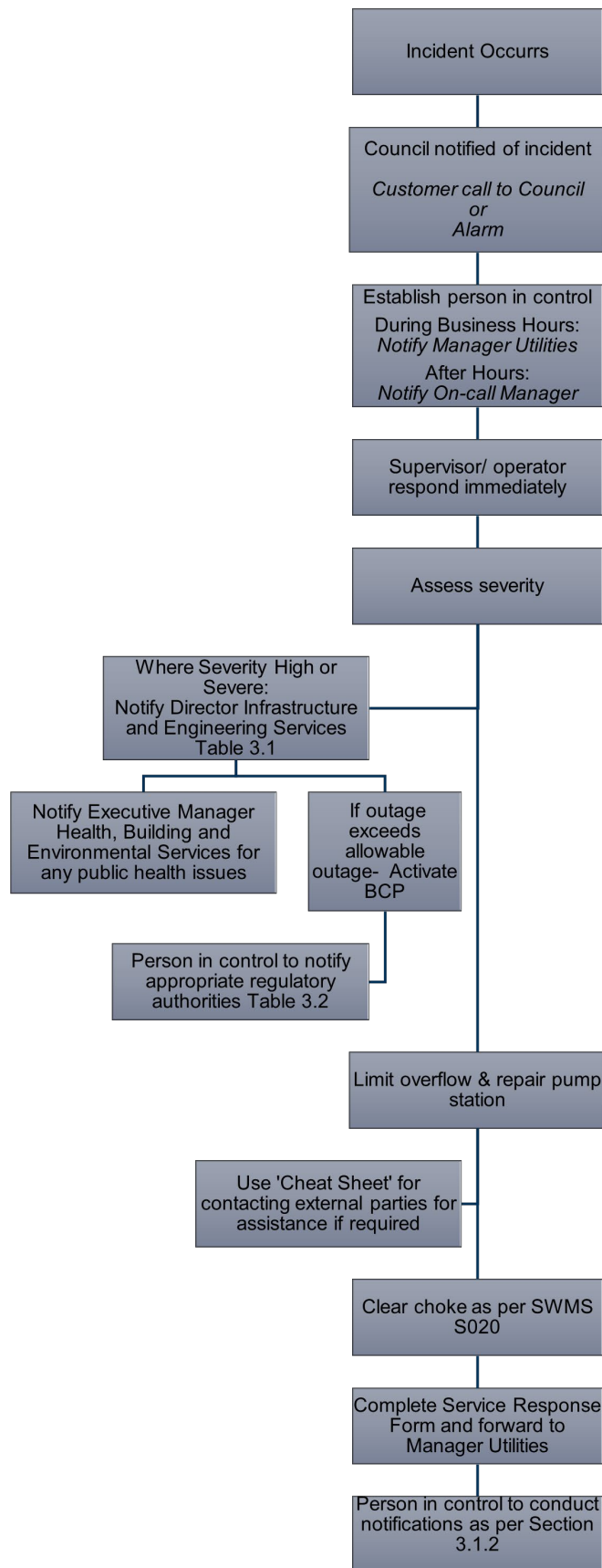


Figure 3.2 Incident response flowchart – sewer choke

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 Incident response training

Type of Training	Personnel Involved	Frequency	Records
NSW Officer of Water Part 1 – Wastewater Treatment Operations	STP Operators	Once	Human Resources WIOA_Acuario Training Platform
NSW Officer of Water Part 2 – Advanced Treatment	STP Operators	Once	Human Resources WIOA_Acuario Training Platform
Induction	New staff	Once	Human Resources WIOA_Acuario Training Platform
Overflow clean up	All water and sewer staff	On-the-job	Nil
Confined space	Sewer staff	As required by training provider	Human Resources WIOA_Acuario Training Platform
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 D.

4.3 PIRMP review

The PIRMP will be reviewed on an annual basis or when there is a material change to operations including but not limited to:

- Modification of EPL 11715.
- 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 Manager Utilities. An update of the PIRMP would trigger all staff to undergo refresher training as part of team toolbox meetings as per Table 4.1. A record of updates to the PIRMP will be maintained as per the register in Appendix D.

5. Disclaimer

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

GHD otherwise disclaims responsibility to any person other than Narromine 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

Incident Reporting Forms

Environmental Incident Report Form

This form is to be completed by staff attending incidents

Incident details			
	Date:		Time:
Description Provide a brief factual description of what happened during the incident, include relevant details such as: the estimated distance to nearest waterway (include stormwater drains and dry watercourses) the estimated distance to the nearest sensitive receiver the activity being undertaken when the incident occurred			
Sketch of the incident			
Exact location of the incident Include chainage, landmarks, features, nearest cross street, etc.			
Who identified the incident?	<input type="checkbox"/> Contractor	<input type="checkbox"/> Council	<input type="checkbox"/> Community
	<input type="checkbox"/> EPA officer	<input type="checkbox"/> EPA complaints line	
	<input type="checkbox"/> Other (Specify)	_____	
	Name:		
	Company:		
	Phone:		

Level of incident (tick most appropriate)			
Level		Example	Action
<input type="checkbox"/>	Minor	E.g. No material has escaped site or caused material harm to the environment –easy to clean up without additional assistance	Control incident with available resources
<input type="checkbox"/>	Major	E.g. Material has escaped site causing pollution of downhill/downstream areas requiring clean up involving other agencies and/or additional resources not available to local site management. Damage has occurred or is likely to occur to the environment	Notify Director Infrastructure and Engineering services
Contact details of those who attended incident			
Name of attendee	Position	Signature	Date
What is the pollutant? (Composition, Quantity, Source, Visual)			
Who has been notified? (Council, Emergency Response, EPA)			
What safety issues are arising from the pollution event? (HAZMAT, Fire, Access)			
Is external assistance required to control the incident?			
Discharge Water Quality Data (if relevant)			
pH:		DO:	
EC:		Redox:	
Temp:		(Other):	

What immediate action was taken to rectify/contain the incident?

Any actions to prevent the incident occurring again?

Sign off

Name:	Signature:	Date:
Position:		
Name:	Signature:	Date:
Position: <i>Manager Utilities, NSC</i>		

Appendix B

Maps

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Appendix C

Risk Minimising Procedures

Risk Minimising Procedures

Council maintain the following procedures for minimising the risk of harm to persons and the environment of operational activities throughout the sewer network:

- OFSWMS S020 – Clear choke in sewer mains and services
- OFSWMS S170 – Narromine treatment works

Appendix D

PIRMP Registers

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