

MURRUMBATEMAN SEWERAGE SYSTEM
EPA LICENCE 20844
POLLUTION INCIDENT RESPONSE MANAGEMENT PLAN



January 2023

Document Control

Version	Author	Reviewer	Approved for Issue	
			Name	Date
August 2017	Kuga Kugaprasatham	Julie Bland	Siva Sivakumar	31 August 2017
January 2019	Kuga Kugaprasatham	N/A	Kuga Kugaprasatham	23 January 2019
January 2020	Kuga Kugaprasatham	N/A	Kuga Kugaprasatham	20 January 2020
January 2021	Mohammad Rahman	Kuga Kugaprasatham	Kuga Kugaprasatham	3 February 2021
January 2022	Mohammad Rahman	Kuga Kugaprasatham	Kuga Kugaprasatham	17 January 2022
January 2023	Ashik John	Kuga Kugaprasatham	Kuga Kugaprasatham	23 January 2023

Foreword

The Pollution Incident Response Management Plan (PIRMP) for the Murrumbateman Sewerage Scheme is to be used by Yass Valley Council in the operation and management of incidents at the Murrumbateman Sewage Treatment Plant (STP) and the sewage collection system. Purpose of the PIRMP is to ensure that, where possible, pollution incidents are avoided but if they do occur they are managed appropriately to minimise the impacts on the environment and to human health.

This PIRMP addresses the requirements under the *Protection of the Environment Legislation Amendment Act* (POELA Act) 2011.

The objectives of the plan are to:

- communicate in a timely manner and with sufficient detail about a pollution incident to relevant authorities and people outside the facilities who may be affected by the impacts of the pollution incident;
- minimise and control the risk of any pollution incident occurring at the facilities by identification of risks and the development of planned actions to minimise and manage those risks; and
- ensure that the plan is properly implemented by trained staff, identifying persons responsible for implementing it, and ensuring that the plan is regularly tested for accuracy, currency and suitability.

This PIRMP is to be continually updated and reviewed by the Engineer Water and Wastewater, Yass Valley Council.

PIRMP was updated on 23 January 2023.

Contents

Foreword	3
Contents	4
Figures	6
Tables	6
1 Introduction.....	7
1.1 Scope of the PIRMP	7
2 Context of the Assessment.....	10
2.1 Background.....	10
2.2 Council Commitment.....	11
2.3 Regulatory and Formal Requirements.....	12
2.4 NSW EPA Licence	12
3 Assessment of the Risks	13
3.1 Risk Assessment – Murrumbateman STP and Collection System	13
3.2 Major Findings	18
4 Preventative Actions to be undertaken.....	19
5 Inventory of Pollutants and Treatment Chemicals.....	23
5.1 Inventory of Treatment Chemicals	23
5.2 Other Pollutants – Sewage and Effluent.....	23
6 Safety Equipment	24
6.1 List of PPE Equipment Available	24
6.2 List of Monitoring Devices	24
7 Roles, Responsibilities and Contact Details.....	26
7.1 Stakeholder Responsibilities and Engagement	26
7.2 List of Contact Details	27
7.3 Council Procedures for Contacting Staff to Respond to a Possible Incident.....	28
8 Incident Classification and Notification.....	29
8.1 Incident Classification.....	29
8.2 Notification Process.....	30
8.3 Workplace Incidents	31
8.4 Investigation of Incidents and Emergencies.....	33
8.5 Environmental Incident Notification Report	33
8.6 Notification to Neighbours	33

9	Minimising Harm to Persons on the Premises	34
9.1	Attendance Register	34
9.2	Site Induction.....	34
9.3	Staff Training.....	34
9.4	Evacuation Procedure.....	34
9.5	Emergency Assembly Point	34
10	Actions to be Undertaken During or Immediately After a Pollution Incident.....	35
10.1	Minor Incident Action Plan.....	35
10.2	Moderate Incident Action Plan.....	36
10.3	Major Incident Action Plan	37
11	Evaluation, Audit and Review for Continuous Development.....	38
11.1	Evaluation and Review	38
11.2	Auditing	38
12	References	39
13	Appendices	40
	Appendix A – Incident Reporting Form	40
	Appendix B - PIRMP Training Register.....	42
	Appendix C – Audit Log Form	43

Figures

Figure 1.1 Map of Murrumbateman Sewerage System	8
Figure 1.2 Murrumbateman STP	9
Figure 1.3 Schematic of Pump Stations	9
Photo 4.1 Murrumbateman SPS.....	22
Photo 4.2 Fairley SPS	22
Figure 6.1 Telemetry Screen Print of Murrumbateman System	25
Figure 8.1 Incident Communication Protocols	32
Figure 11.1 Minor Incident Action Plan.....	35
Figure 11.2 Moderate Incident Action Plan.....	36
Figure 11.3 Major Incident Action Plan	37

Tables

Table 2.1 Formal and Regulatory Requirements	12
Table 3.1 Definitions of Likelihood	13
Table 3.2 Definitions of Impact	14
Table 3.3 Risk Analysis Criteria	14
Table 3.4 Risk Register.....	15
Table 4.1 Sewage Pumping Stations.....	21
Table 6.1 List of PPE Equipment Available	24
Table 6.2 List of Monitoring Devices	24
Table 7.1 Stakeholder Responsibilities and Engagement.....	26
Table 7.2 Stakeholder Contact Details	27

1 Introduction

Murrumbateman Village lies within the Yass Valley Local Government Area (LGA). Yass Valley Council owns and operates the Murrumbateman Sewerage Scheme that includes a sewage treatment plant (STP) and the reticulation system servicing the village and adjoining area in Fairley Estate.

Sewer service area consists of existing village of Murrumbateman with approximately 130 properties and the new development in Fairley Village. Fairley SPS service fourteen residential lots in Fairley Village. Sewage from existing village and Fairley Village is transferred by gravity sewer along the side of Barton Highway (225 mm diameter, 2.1 km long) to the Murrumbateman SPS. Sewage is then pumped to Murrumbateman STP through a rising main (150mm diameter, 2.3 km long).

Murrumbateman Sewage Treatment Plant (STP) uses pond based system to treat sewage and has a capacity to serve 1,500 EP (equivalent population). Treatment at the STP consists of coarse screening followed by two oxidation ponds (11.8 ML and 10.3 ML) and Maturation Pond (8 ML) in series. Treated water from Maturation Ponds is stored in Effluent Storage Pond (70 ML). It is designed to utilise treated effluent stored in an Effluent Storage Pond for irrigation. Three irrigation areas (10 ha each) are designated for that purpose.

Yass Valley Council operates this Scheme under the EPA Licence No. 20844. Effluent discharge from STP is permitted during extreme wet weather only. Any effluent that overflows during extreme wet weather will reach nearby Murrumbateman Creek. Monitoring of the effluent quality used for irrigation is required.

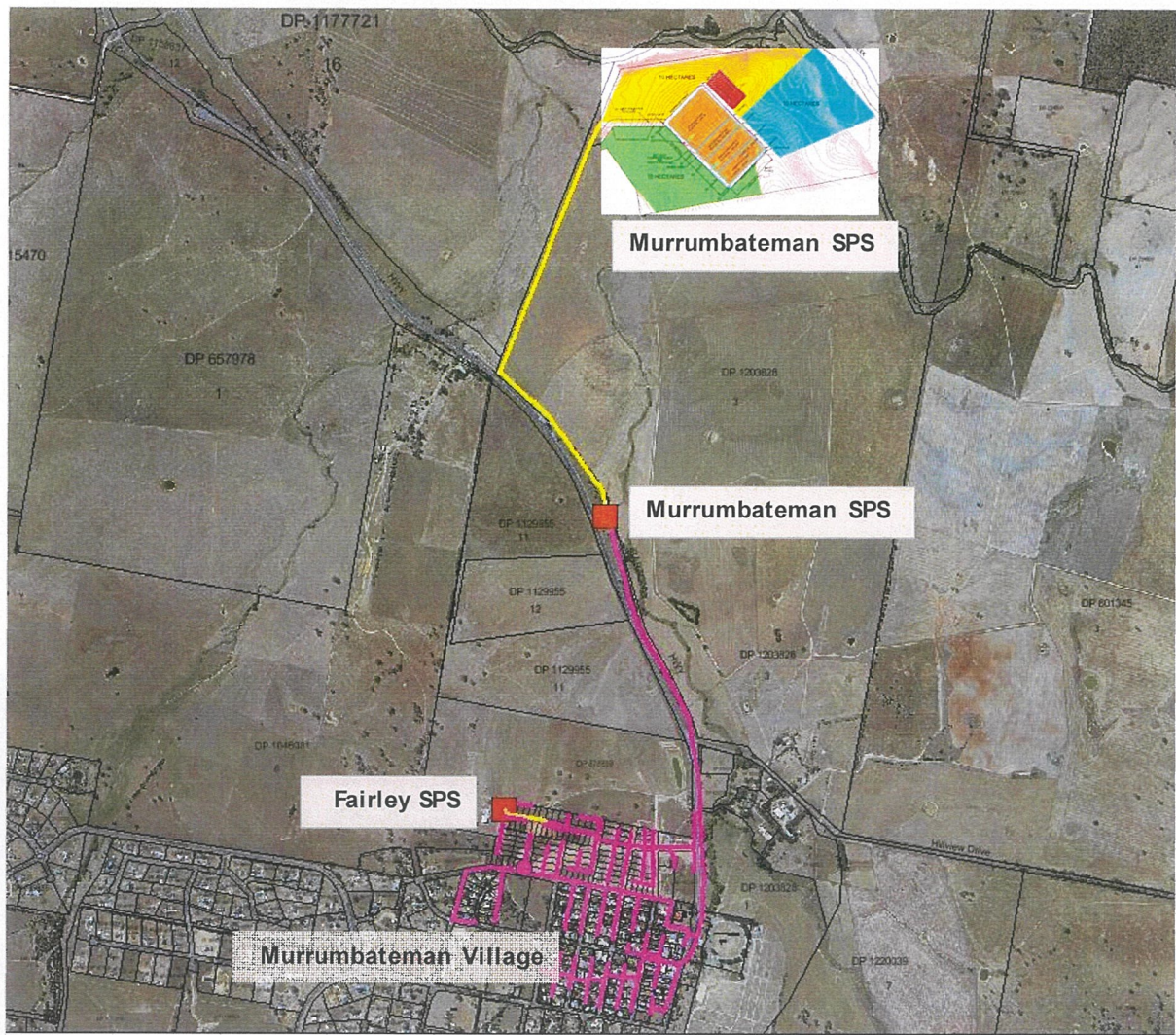
Maps of the sewerage system, Murrumbateman STP and schematic of SPSs are shown in Figure 1.1, 1.2 and 1.3 respectively.

1.1 Scope of the PIRMP

The scope of the plan is as follows:

- Description and likelihood of hazards;
- Pre-emptive actions to be taken;
- Inventory of pollutants;
- Safety equipment;
- Contact details;
- Communicating with neighbours and the local community;
- Minimising harm to persons;
- Maps showing location of scheme components;
- Actions to be taken during or immediately after a pollution incident; and
- Staff training.

Figure 1.1 Map of Murrumbateman Sewerage System



The map illustrates a proposed development area along the Murrumbidgee River. It is divided into three main 10-hectare zones: a yellow zone at the top, a blue zone on the right, and a green zone at the bottom. A central orange-colored area contains several rectangular plots, some labeled 'STORAGE POND' and 'ROAD'. A red rectangular area is also present within the yellow zone. The map features contour lines indicating elevation, with labels such as '100m', '110m', and '120m'. A 'PUMPING STATION' is located near the center, with a 'PUMP' and 'ELECTRICITY' connection. A 'BRIDGE' is shown crossing the river. The river itself is labeled 'MURRUMBIDGEE RIVER' and 'CREEK'. A scale bar at the bottom indicates distances from 0 to 100 meters. A north arrow is located in the top right corner. The map also shows 'ROADS' and 'FENCES'.

FAIRLEY SPS

MURRUMBATEMAN SPS

MURRUMBATEMAN STP

IRRIGATION PS

EXTREME WET WEATHER OVERLAND FLOW

MURRUMBATEMAN CREEK

2 Context of the Assessment

2.1 Background

A new provision under the *Protection of the Environment Legislation Amendment Act* (POELA) 2011 is the requirement to prepare, keep, test and implement a pollution incident response management plan for each environmental protection licence that Council holds.

The objectives of these plans are to:

- communicate in a timely manner and with sufficient detail about a pollution incident to relevant authorities and people outside the facilities who may be affected by the impacts of the pollution incident;
- minimise and control the risk of any pollution incident occurring at the facilities by requiring identification of risks and the development of planned actions to minimise and manage those risks; and
- ensure that the plan is properly implemented by trained staff, identifying persons responsible for implementing it, and ensuring that the plan is regularly tested for accuracy, currency and suitability.

The NSW EPA defines a 'pollution incident' as follows;

"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."

A pollution incident is required to be notified if there is a risk of 'material harm to the environment', which is defined in section 147 of the POEO Act as:

"(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."

Industry is now required to report pollution incidents *immediately* to the EPA, NSW Health, Fire and Rescue NSW, SafeWork NSW and the local council. 'Immediately' has its ordinary dictionary meaning of promptly and without delay. These strengthened provisions will ensure that pollution incidents are reported directly to the relevant response agencies so they will have direct access to the information they need to manage and deal with the incident in as fast a time as is practical.

The NSW EPA requires a plan to be implemented for all existing licences.

2.2 Council Commitment

Yass Valley Council is committed to protecting the health and safety of the public, the environment and its workers. The Tablelands Regional Community Strategic Plan 2016-2036 (TRCSP) in which Yass Valley Council is a member addresses the long term needs particularly in relation to protecting the natural environment.

Strategic Pillar:

Environment is one of the strategic pillar on which TRCSP is based on and states “We appreciate our range of rural landscapes and habitats, and acts as custodians of the natural environment for the future generations”.

NSW Local Government Legislation

The *Local Government Act 1993* contains a Charter for Local Government which describes the approach to supplying services and activities. It charges local government with a number of responsibilities including, but not limited to, the following:

- to provide directly or on behalf of other levels of government, after due consultation, adequate, equitable and appropriate services and facilities for the community and to ensure that those services and facilities are managed efficiently and effectively;
- to exercise community leadership;
- to properly manage, develop, protect, restore, enhance and conserve the environment of the area for which it is responsible, in a manner that is consistent with and promotes the principles of ecologically sustainable development;
- to bear in mind that it is the custodian and trustee of public assets and to effectively account for and manage the assets for which it is responsible;
- to engage in long-term strategic planning on behalf of the local community; and
- to keep the local community and the State Government (and through it, the wider community) informed about its activities.

2.3 Regulatory and Formal Requirements

The regulatory and formal requirements applicable to the Murrumbateman Sewerage Scheme are shown in **Table 2.1**. These legislative and licensing requirements and guidelines are to be met to ensure the protection of environmental and public health and to satisfy work health and safety (WHS) requirements. This PIRMP addresses how these requirements are to be met.

Table 2.1 Formal and Regulatory Requirements

Parameter	Instrument	Administered by
Overall Scheme Operation	Water Management Act 2000	NSW EPA
	Local Government Act 1993	DPI Water (Department of Primary Industries)
	Catchment Management Authorities Act 2003	Murrumbidgee Catchment Management Authority (CMA)
Public Health	Environment Operations Act 2011	NSW EPA, NSW health
Environmental Health	Section 55 Protection of the Environment Operations Act 2011 Environment Protection Licence No.20844	NSW EPA
Work Health and Safety	Work Health and Safety Act 2011 (WHS Act) and the WHS Regulations 2017	SafeWork NSW
Plumbing	All pipe work associated with recycled water schemes is to be installed in accordance with AS/NZS 3500 (Plumbing and Drainage Code: Standards Australia 1996-2003)	Yass Valley Council

Water and Wastewater Engineer of Yass Valley Council is responsible for the review and evaluation of this PIRMP.

2.4 NSW EPA Licence

Murrumbateman STP is operated under the Environment Protection Licence No 20844 issued in November 2016.

Murrumbateman STP is well below its capacity as the properties are getting connected gradually since May 2016. STP is yet to produce any effluent to discharge to the environment.

3 Assessment of the Risks

3.1 Risk Assessment – Murrumbateman STP and Collection System

The objectives of the assessment are to:

- identify the hazards,
- identify hazardous events
- assessment of the likelihood of the event and other factors that may increase the likelihood
- assess the impacts
- assess the overall risk.

Definition of likelihood, impact and risk criteria used in the assessment are shown in **Table 3.1**, **Table 3.2**, and **Table 3.3**.

As can be seen in **Table 3.4**, the identified hazard events relating to the STP are all assessed to be of low risk.

Table 3.1 Definitions of Likelihood

Level	Likelihood	Description
A	Almost certain	- The event is expected to occur often (several times per year)
B	Likely	- The event will probably occur often (once every 1-3 years)
C	Possible	- The event might occur at some time (once every 3 to 10 years)
D	Unlikely	- The event could occur at some time (once every 20 years)
E	Rare	- The event may occur only in exceptional circumstances (once every 100 years)

Table 3.2 Definitions of Impact

Level	Classification	Description
1	Catastrophic	The overflow is likely to drain to a local sensitive environment* and: <ul style="list-style-type: none"> - Where the overflow reaches waters, the volume of sewage likely to enter the waterways is very high with regard to the volume and flow of receiving waters, or - Where the overflow discharges to land, the public exposure risk is high given the maximum response time**
2	Major	The overflow is likely to drain to a local sensitive environment* and: <ul style="list-style-type: none"> - Where the overflow reaches waters, the volume of sewage likely to enter the waterway is high with regard to the volume and flow of receiving waters, or - Where the overflow reaches land, the public exposure risk is likely given the maximum response time**
3	Moderate	The overflow is likely to drain to a local sensitive environment* and: <ul style="list-style-type: none"> - Where the overflow reaches waters, the volume of sewage likely to enter the waterways is significant with regard to the volume and flow of receiving waters, or - Where the overflow reaches land, it may travel to an area where public exposure is low within the maximum response time**
4	Minor	The overflow is unlikely to drain to a local sensitive environment* and: <ul style="list-style-type: none"> - Where the overflow reaches waters, the volume of sewage likely to enter the waterways may be significant with regard to the volume and flow of receiving waters, or - Where the overflow reaches land, it is likely to be contained in an area where the public exposure is minimal given the maximum response time**
5	Insignificant	The overflow is extremely unlikely to drain to a local sensitive environment* and: <ul style="list-style-type: none"> - Where the overflow reaches waters, the volume of sewage likely to enter the waterways is insignificant with regard to the volume and flow of receiving waters, or - Where the overflow reaches land, it is likely to be contained in an area with little chance of public exposure within the maximum response time**

* A sensitive environment includes: a drinking water catchment or domestic groundwater source, or shellfish growing area, or protected water bodies, ecological communities or conservation areas defined by legal and non-legal instruments, such as local environment plans (LEPs), State environmental planning policies (SEPPs), national parks, and class P or class S waters, or waterways used for primary contact recreation, or a recreational area or other area with high public exposure or associated health risk.

** Maximum response time should be based on the length of time taken for the licensee to detect the overflow, or for the overflow to be reported, and the time taken for the licensee to attend the site and secure against public contact

Table 3.3 Risk Analysis Criteria

Likelihood	Impacts				
	Catastrophic 1	Major 2	Moderate 3	Minor 4	Insignificant 5
Almost Certain – A	Very High	Very High	High	Moderate	Low
Likely – B	Very High	Very High	High	Moderate	Low
Possible – C	Very High	High	Moderate	Moderate	Low
Unlikely – D	Very High	High	Moderate	Low	Low
Rare – E	High	Moderate	Low	Low	Low

Table 3.4 Risk Register

No.	CONTAMINANT	HAZARDOUS EVENT	PUBLIC HEALTH RISKS	ENVIRONMENTAL RISKS	LIKELIHOOD (refer Table 3.1)	EVENTS / CIRCUMSTANCES THAT INCREASE LIKELIHOOD	IMPACT (refer Table 3.2)	ASSESSED RISK (refer Table 3.3)	PRE-EMPTIVE ACTIONS (EXISTING CONTROLS)	RESIDUAL RISK (refer Table 3.3)
Murrumbateman STP										
1	Sewage	Overflow	N/A	X	Possible	Blockage at the Inlet Screen	Minor	MODERATE	Weekly inspection and cleaning of Inlet Screen	LOW
2	Treated Effluent	Overflow	N/A	X	Possible	Prolonged wet weather events	Minor	MODERATE	Effluent Storage Tank (70 ML) and irrigation areas (three areas each 10 hectares) designed to reduce the occurrences	LOW
3	Treated Effluent	Poor quality	N/A	X	Possible	Prolonged wet weather events	Minor	MODERATE	Sizing of Facultative and Maturation ponds.	LOW
4	Treated Effluent	Overland flow	X	X	Possible	Pipe breaks or malfunctioning of sensors in the irrigation system	Minor	MODERATE	Irrigation system is yet to be commissioned. Inspection and maintenance is required once the system is commissioned. Frequency of such inspection to be determined.	LOW
Murrumbateman SPS										
5	Sewage	Overflow	X	X	Unlikely	Power/pump failure	Minor	LOW	Standby pump. Standby generator. 8-hour emergency storage. Fault alarm to Sewer-on-Call Operator. Operator response within 2 hours.	LOW
6	Sewage	Overflow	X	X	Possible	Switch board or generator damage due to bushfire / vehicle overrun from highway	Major	HIGH	8-hour emergency storage. By-pass arrangement from inlet manhole to rising main possible with a hired mobile pump unit.	MODERATE

No.	CONTAMINANT	HAZARDOUS EVENT	PUBLIC HEALTH RISKS	ENVIRONMENTAL RISKS	LIKELIHOOD (refer Table 3.1)	EVENTS / CIRCUMSTANCES THAT INCREASE LIKELIHOOD	IMPACT (refer Table 3.2)	ASSESSED RISK (refer Table 3.3)	PRE-EMPTIVE ACTIONS (EXISTING CONTROLS)	RESIDUAL RISK (refer Table 3.3)
Fairley SPS										
7	Sewage	Overflow	X	X	Likely	Power/pump failure	Minor	MODERATE	Standby pump. 8-hour ADWF emergency storage. Provision of connection for a mobile generator Fault alarm to Sewer-on-Call Operator. Operator response within 2 hours.	LOW
Gravity Sewers										
8	Sewage	Overflow	X	X	Possible	Sewer main blockage Extreme wet weather event	Minor	MODERATE	Notification by residents etc. Operator to call tanker. Operator response within 2 hours. Install by-pass or diversion if necessary. Gatic covers for manholes along trunk main. Small volumes.	LOW
9	Sewage	Discharge	X	X	Unlikely	Pipe break due to ground movement or earthquake	Moderate	MODERATE	Install emergency pump for bypass or diversion.	LOW
10	Sewage	Discharge	X	X	Unlikely	Pipe break due to excavation works	Moderate	MODERATE	Dial-before-you-dig. Maintain up to date asset plans/records.	LOW
Rising Mains										
11	Sewage	Spillage	X	X	Unlikely	Pipe break due to poor pipe condition	Moderate	MODERATE	Flow / pump monitoring in telemetry system. Operator to call tanker. Stock spare parts for rising main repair.	LOW

No.	CONTAMINANT	HAZARDOUS EVENT	PUBLIC HEALTH RISKS	ENVIRONMENTAL RISKS	LIKELIHOOD (refer Table 3.1)	EVENTS / CIRCUMSTANCES THAT INCREASE LIKELIHOOD	IMPACT (refer Table 3.2)	ASSESSED RISK (refer Table 3.3)	PRE-EMPTIVE ACTIONS (EXISTING CONTROLS)	RESIDUAL RISK (refer Table 3.3)
12	Sewage	Discharge	X	X	Unlikely	Rising main break due to ground movement or earthquake	Moderate	MODERATE	Flow / pump monitoring in telemetry system. Stock spare parts for rising main repair.	LOW
13	Sewage	Discharge	X	X	Unlikely	Pipe break due to excavation works	Moderate	MODERATE	Dial-before-you-dig. Maintain up to date asset plans/records. Stock spare parts for rising main repair.	LOW

3.2 Major Findings

From the risk register outlined in **Table 3.4**, the following were identified:

- a) Identified hazard events relating to the STP were assessed to be of MODERATE risk.
- b) Assessment of overall environmental and/or health risks posed by overflows at SPSs ranged from LOW to HIGH.
- c) Damage of switchboard by bushfire or by a vehicle overrun is assessed as HIGH for the Murrumbateman SPS.
- d) The gravity systems and the rising mains pose MODERATE environment/health risks during overflow and discharge events.
- e) With preventive measures in place, residual risks are MODERATE to LOW categories.

4 Preventative Actions to be undertaken

The preventative actions or measures to management and minimise the risk to human health and the environment involve a multiple barrier approach. The multiple barriers, in order of preference are as follows:

- Elimination;
- Substitution;
- Isolation;
- Engineering means;
- Administrative and
- Personal Protection Equipment (PPE).

These are readily broken down to the following classification of management strategies:

- Appropriate design of the facilities;
- Appropriate operation and monitoring and
- Appropriate education and training.

The identified current preventative actions are described in this section. Photos of Murrumbateman SPS and Fairley SPS are provided in **Photo 4.1** and **Photo 4.2** respectively.

4.1 Collection System

Collection System overflows can principally occur from four main causes. They are:

- Power / mechanical failure at pumping stations,
- Reticulation system blockage / leakage,
- Rising main breakage (leaks or major failure), and
- Excessive inflows during extreme wet weather.

4.1.1 Gravity Sewer System

Murrumbateman reticulation is in good condition and has sufficient capacity. There has been no overflow or blockage incidents since the system was commissioned in April 2016.

4.1.2 Rising Mains

There are two rising mains in the system and both are in good condition. Detectable marker tapes are installed above these pipes to prevent any damage during excavation works.

4.2 Pumping Stations

The likelihood of overflows from SPSs can be minimised by the provision of the following;

- Adequate pumping capacity;
- Reliable power supply;
- Emergency storage above normal operating levels;
- Monitoring and alarm systems;
- Service response time to address abnormal operating conditions such as power failure, pump failure, etc.;

- Availability of standby pumps to handle pump failure and/or standby/portable generators to handle power supply / electrical failure; and
- Implementation of an effective emergency plan/operational procedures for attending to failures and breakdowns within the system.

4.2.1 Adequate Pumping Capacity

All pumps in Murrumbateman sewerage Scheme have sufficient pumping capacity for present and projected future requirements.

4.2.2 Reliable Power Supply

Generally, power outages in Murrumbateman area have been less than 6 hours in duration. While not common power failures of extended duration are possible but are usually planned outages.

4.2.3 Provision of Emergency Storage or Standby

Murrumbateman Sewerage Scheme was commissioned in May 2016 and 8-hour emergency storage above normal operating levels is provided at each pump station as required by NSW EPA.

4.2.4 Telemetry System

Pumps installed in STP and SPSs are monitored via a telemetry system. Instances of power outages, mechanical failure, and high-level alarms are transmitted to the Sewer Operators in the form of an automatic phone message for immediate attention. The operator then responds to the alarm by attending to the relevant site. Operator time will be within two (2) hours of notification.

4.2.5 Response Times to Abnormal Conditions

Response time for Operator attendance to any abnormal operating condition in Murrumbateman will generally be less than two (2) hours.

4.2.6 Standby Pumps

All SPSs have duty and standby pumps installed. Preventive maintenance is undertaken regularly. Murrumbateman SPS has a standby generator on-site and needs to be switched by an operator when there is prolonged power outage. Fairley SPS has a generator connection point. Council has two mobile generators. These generators can be used for Fairley SPS.

4.3 Sewage Treatment Plant Overflows

Murrumbateman Sewerage Scheme was commissioned in May 2016 and is operating at approximately one fifth of its design capacity at present. Treatment ponds have sufficient capacity and therefore overflows are not expected at the STP for the next several years. Water level in the Effluent Storage Pond is monitored by the telemetry and will alert operators when it nears overflow level. Irrigation system is not required for couple of years and is therefore not installed yet.

The STP is designed for minimum maintenance. STP is unmanned and it is inspected and cleaned weekly. Frequency of operator attendance will need to be reviewed at the time when ponds reaching their capacity with increase in flow.

Effluent Storage Pond is yet to fill to its capacity. Therefore, effluent overflow is not expected to happen in the near future. Blockage at the coarse screen at the STP Inlet is possible and may result in the overland flow to the nearby pond.

No overflows due to wet weather events have been recorded since it was commissioned in May 2016.

Details of various parameters relating to the SPSs including planned works for improving resilience and mitigation of risks are summarised in **Table 4.1**.

Table 4.1 Sewage Pumping Stations

SPS	Murrumbateman SPS	Fairley SPS
Pumping Capacity	20 L/s @ 20 m head – single pump 26 L/s @ 27 m head – both pumps	2.8 L/s @ 9.25 m head
Emergency storage	Adequate (more than 8-hour above normal operating levels)	Adequate (more than 8-hour above normal operating levels)
Standby Pumps	Installed	Installed
Power Supply	Reliable Standby generator on-site	Reliable Portable generator connection point installed
Telemetry System	Available	Available
Improvement Work	None necessary	None necessary

Photo 4.1 Murrumbateman SPS



Photo 4.2 Fairley SPS



5 Inventory of Pollutants and Treatment Chemicals

5.1 Inventory of Treatment Chemicals

There is no provision for any storage of chemicals in the Murrumbateman STP premises.

5.2 Other Pollutants – Sewage and Effluent

The other potential pollutants are:

- Sewage – within the collection system and at Inlet of the STP.
- Effluent – produced at the STP and stored at Effluent Storage Pond.
- Screenings – produced at the STP inlet works are captured by coarse screens and are of very small volume. They are transferred by the operators for subsequent off-site disposal at Yass STP with the screenings collected there.

6 Safety Equipment

Safety equipment and other devices that are provided on-site will minimise the risks to human health or the environment and contain or control a pollution incident. These will include any PPE, SDSs, monitoring devices and spill containment facilities/equipment.

The following PPE safety equipment is available to operators:

6.1 List of PPE Equipment Available

The following PPE safety equipment is available to operators:

Table 6.1 List of PPE Equipment Available

Personal Protective Equipment	Location
Protective gloves	Yass STP Amenities Building & Operator Truck
High Visibility Vests	Each operator to collect at stores
Dust mask	Yass STP and Operators Truck
Hearing protection	Yass STP and Operators Truck
Safety glasses	Yass STP and Operators Truck
Safety apron	Yass STP and Operators Truck
Safety harness	Yass STP Amenities building and Riverbank SPS
Sun screen	Operators Truck
Gumboots	Operators Truck

6.2 List of Monitoring Devices

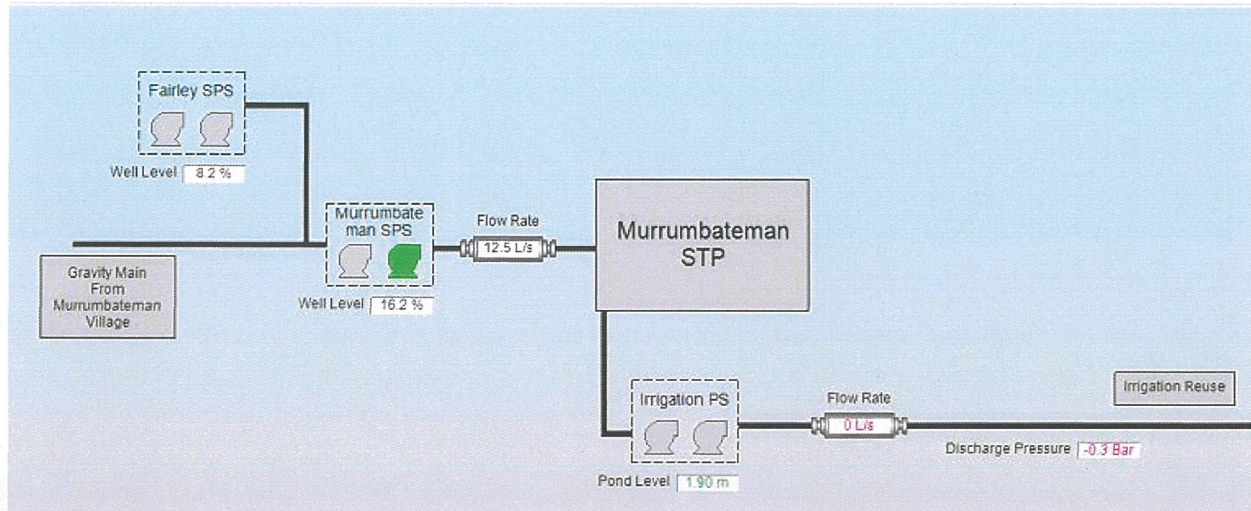
The following monitoring devices are present onsite:

Table 6.2 List of Monitoring Devices

System	Monitoring Devices	Devices Alert
STP	Telemetry system monitors - Pond level in Effluent Storage Pond - Effluent Irrigation Pump Flow Rate	Voice message is sent automatically to Sewer-on-Call Phone held by Sewer On Call Operator. If no answer, it will switch to Duty Officer. Phone will keep ringing until answered.
SPSs	Wet Well Levels High Level alarm at SPS Power failure at SPS Mechanical failure at SPS Pump Flow rate at SPS	

A screen print of the Murrumbateman System is shown in **Figure 6.1**.

Figure 6.1 Telemetry Screen Print of Murrumbateman System



7 Roles, Responsibilities and Contact Details

7.1 Stakeholder Responsibilities and Engagement

Council has committed to operating its STP and collection system in a responsible manner. Effective stakeholder engagement is necessary to fulfil this commitment. **Table 7.1** presents the stakeholders involved in the operation of the STP and collection system, sets out their roles and the communication expected to occur to achieve safe operation of the plant and collection system. Further information on the operation of the system and communication protocols is addressed later in this plan.

Table 7.1 Stakeholder Responsibilities and Engagement

Stakeholder	Responsibility	Communicates with	Reason
Director Infrastructure and Assets	Overall scheme operation/responsibility	Manager Water and Wastewater	Technical advice
		NSW Health	Health advice, reporting incidents
		EPA	Reporting on Licence compliance, reporting incidents
		Community of Yass	Advice where required during incidents
		State Cover &/or SafeWork NSW	Reporting of injuries and accidents where required.
Manager Water and Wastewater	Management of scheme operation and maintenance, emergency response	Council operators, Coordinator Water and Wastewater and Director Infrastructure and Assets	Management of operations staff, reporting issues regarding operation, maintenance and compliance to Council, resolving site issues.
Operations Engineer Water and Wastewater	Operation, maintenance, and emergency response	Manager Water and Wastewater, Water & Wastewater Coordinator and Council operators	Technical support to operations, reporting issues regarding operation, maintenance and compliance to Council
Coordinator Water and Wastewater	Operation, maintenance, and emergency response	Council operators, Engineer Water and Wastewater and Manager Water and Wastewater Business	Management of operations staff, resolving site issues, reporting issues regarding operation, maintenance and compliance to Council.
Council Sewer Operators	Day to day operation of STP and collection system, response to emergencies	Coordinator Water & Wastewater Engineers Water and Wastewater	Communicates issues regarding operation, maintenance and compliance
Police /Fire brigade/HAZMAT/ Ambulance/ SES	Response to emergencies	Director Infrastructure and Assets	Response to spills, injuries, accidents

7.2 List of Contact Details

The contact details of the stakeholders are listed below in **Table 7.2**. Contact information can be used in notifying the relevant authority in the event of a pollution incident.

Table 7.2 Stakeholder Contact Details

Organisation	Position and Contacts	Phone	Email
Yass Valley Council	After hours contact number (Duty Officer)	0408 625 694	
	Business hours contact number	02 6226 1477 1300 553 652	council@yass.nsw.gov.au
	Director Infrastructure and Assets Vacant	02 6226 9250 0497 001 450	
	Manager Water and Wastewater Kuga Kugaprasatham	02 6226 9246	kkugaprasatham@yass.nsw.gov.au
	Operations Engineer Water and Wastewater Ashik Georgy John	02 6226 9246	ajohn@yass.nsw.gov.au
	Coordinator Water and Wastewater Aaron Shepherd	0400 554 585	ashepherd@yass.nsw.gov.au
	Sewer-on-Call	0428 162 497	
NSW EPA	Pollution Line	13 15 55	
Ministry of Health	Public Health Unit Goulburn	1300 066 055	
DPE Water	Water and Sewerage Treatment Officer Chris Carlon	0419 624 576 02 4275 9318	
Fire and Rescue NSW		1300 729 579	
HAZMAT		000	
Poisons Information Line		13 11 26	
State Emergency Service (SES)	Police, Fire Brigade, Ambulance, Hazmat	000	
SafeWork NSW		13 10 50	

7.3 Council Procedures for Contacting Staff to Respond to a Possible Incident

STP Operator

All SPS and STP telemetry alarms are transmitted by voice message to the SEWER On-Call (Duty Operator).

The Operator will attend to an alarm within two (2) hours and report to the Coordinator Water and Wastewater.

Any blockages reported within the sewage collection system are attended to by the Operators – cleared with Rodding machine using rigid rods or flexible rods. All works are undertaken to comply with the relevant SafeWork Method Statement(s) and appropriate action report forms are to be completed.

Murrumbateman Residents

The following procedure is followed when an incident is noticed by a resident.

During normal office hours – 8.30am to 4.30pm Monday to Friday

Residents contact the Yass Valley Council Office on 02 6226 1477 (or 1300 553 652). The Customer Service Officers collect the details of the incident (including contact details of the person making the report) and immediately notify the relevant officers on their mobile telephone. The following hierarchy is used for notification.

Customer Service Officer → SEWER On-Call → Coordinator Water and Wastewater → Operations Engineer Water and Wastewater → Manager Water and Wastewater Business → Director Infrastructure and Assets

The Customer Service Officers call those on the list until an officer answers and takes the incident details. The Officer then responds immediately to the incident.

After hours – 4.30pm to 8.30am weekdays and all day Saturday and Sunday

Residents contact the Yass Valley Council Office on 0408 625 694. The Duty Officer collects the details of the incident (including contact details of the person making the report) and immediately notifies the relevant officers on their mobile telephone. For Murrumbateman STP the following hierarchy is used for notification.

Duty Officer → SEWER On-Call → Coordinator Water and Wastewater → Operations Engineer Water and Wastewater → Manager Water and Wastewater Business → Director Infrastructure and Assets

Duty officer calls those on the list until an officer answers and takes the incident details. The Officer then responds immediately to the incident.

8 Incident Classification and Notification

To determine the appropriate communication strategy for an incident, the incident needs to be categorised. Once categorised, the prescribed communication strategy can be deployed.

8.1 Incident Classification

- **Minor Risk Incident:** managed by routine procedures/work practices.
 - Incident affects small area only AND
 - Incident is easy to clean up without additional assistance AND
 - There is no risk of material harm to humans or the environment.
- **Moderate Risk Incident:** further investigation may be required and assessment of management options; in the short term, operations and maintenance adjusted to reduce the consequences, likelihood and exposure.
 - Incident affects more than one property OR
 - There is a risk of pollution or material harm to the environment BUT
 - Clean up can be completed without assistance AND
 - There is no danger to humans.
- **Major Risk Incident:** further detailed investigation and assessment of management options is required; immediate review and adjust operations and maintenance to reduce the consequences, likelihood and exposure; clean-up and notification procedures become high priority.
 - Potential or actual harm to humans and the environment AND/OR
 - Assistance is required with clean up from other agencies

The following examples are shown;

- Minor Risk Incidents – incidents with a low risk to health and the environment such as;
 - Reticulation system blockages
 - Short term power failure or electrical failure
 - Minor spills to the ground
- Moderate Risk Incident - an incident with a medium risk to health and the environment such as;
 - Major spills to the ground and or to a sensitive environment
 - Sewage spills to a waterway
 - Extended power failure
- Major Risk Incident - an incident with a high risk to health and the environment such as;
 - Major sewage spill to a waterway
 - Extended power failure wet weather
 - Earthquake or structural collapse causing significant damage

8.2 Notification Process

The following incident notification process will be undertaken for the identified incident levels;

- **Minor Risk Incident**
 - The operator will report MINOR incidents to the Coordinator Water and Wastewater ASAP
 - The Coordinator Water and Wastewater to report to the Manager Water and Wastewater Business Monthly.
 - The Manager Water and Wastewater will report MINOR incidents to the Director Infrastructure and Assets Quarterly.
 - The Coordinator Water and Wastewater will record MINOR incidents in the PIRMP.
- **Moderate Risk Incident – Notifiable**
 - The Sewer operator will report MODERATE incidents to the Coordinator Water and Wastewater - **IMMEDIATELY**
 - The Coordinator Water and Wastewater will report MODERATE incidents to the Engineer Water and Wastewater and the Manager Water and Wastewater Business - **IMMEDIATELY**
 - The Manager Water and Wastewater Business will report MODERATE incidents to the Environmental Health Officer, the Director Infrastructure and Assets - **IMMEDIATELY**
 - The Manager Water and Wastewater Business will report MODERATE incidents to the EPA, NSW Health and SafeWork NSW (if required) - **IMMEDIATELY**
 - If overflows occur - The Director Infrastructure and Assets will report SIGNIFICANT OR HIGH RISK incidences **IMMEDIATELY** to EPA
 - If public affected call 000 emergency services and NSW Health
 - Notify neighbours
 - The Engineer Water and Wastewater will record MODERATE incidents and corrective actions in the PIRMP.
- **Major Risk Incident - Notifiable**
 - The Sewer operator will report MAJOR incidents to the Coordinator Water and Wastewater - **IMMEDIATELY**
 - The Coordinator Water and Wastewater will report MAJOR incidents to the Engineer Water and Wastewater and the Manager Water and Wastewater Business, the neighbour - **IMMEDIATELY**
 - The Manager Water and Wastewater Business will report MODERATE incidents to the Environmental Health Officer, the Director Infrastructure and Assets, the General Manager - **IMMEDIATELY**
 - The Manager Water and Wastewater Business and Director Infrastructure and Assets will report MAJOR incidents to the Emergency Services, EPA, NSW Health and SafeWork NSW (if required)- **IMMEDIATELY**
 - If overflows occur - The Director Engineering will report SIGNIFICANT OR HIGH RISK incidences **IMMEDIATELY** to EPA, NSW Health and SafeWork NSW
 - If public affected call 000 emergency services
 - Notify neighbours
 - The Director Infrastructure and Assets will report MAJOR incidents to the Councillor, Media, the General Manager and others - **IMMEDIATELY**

- The Operations Engineer Water and Wastewater will record MAJOR incidents and corrective actions in the PIRMP.

This is shown schematically in **Figure 8.1**.

This procedure will form part of the operator training and awareness program.

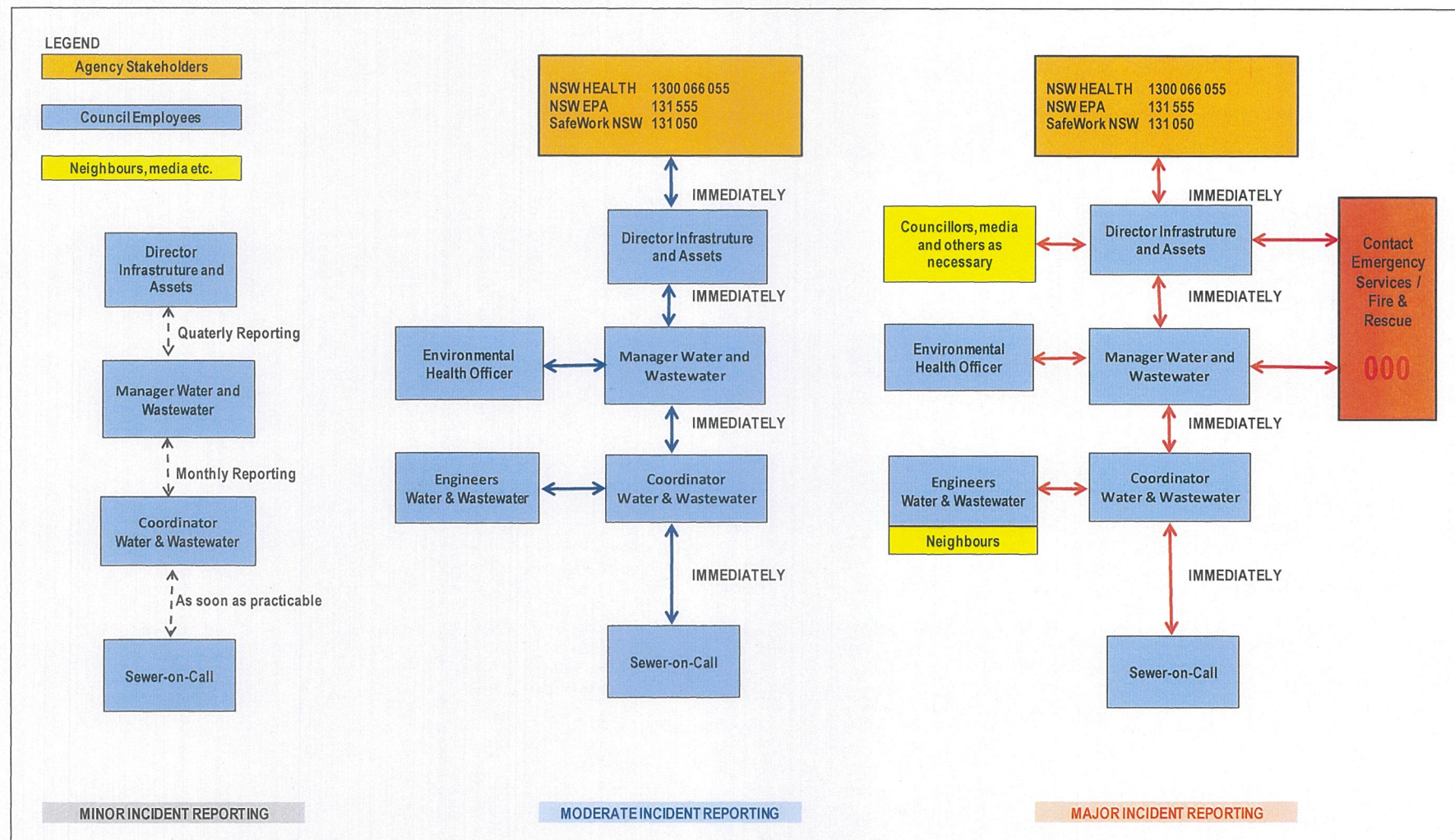
Incident reporting includes communicating the incident and also documenting the incident as required by Council procedures.

8.3 Workplace Incidents

The following incidents and injuries must be reported to SafeWork NSW:

- incidents involving a fatality or a serious injury or illness
- incidents involving a fatality or serious injury or illness to other people at your workplace
- incidents that present a serious risk to health and safety at your workplace (dangerous occurrence)
- All incidents involving an injury to staff must be reported to State Cover.

Figure 8.1 Incident Communication Protocols



8.4 Investigation of Incidents and Emergencies

Following any incident or emergency situation, including any “near misses”, an investigation will be undertaken and all involved staff debriefed to discuss performance and address any issues or concerns.

The investigation will consider factors such as:

- What was the initiating cause of the problem?
- How was the problem first identified or recognised?
- What were the most critical actions required?
- What communication problems arose and how were they addressed?
- What were the immediate and longer term consequences?
- How well did the protocol function?
- What action or further mitigation strategies need to be considered or implemented?

8.5 Environmental Incident Notification Report

The *Environmental Incident Report* references the new requirements under Part 5.7 of the POEO Act and provides councils with a generic form/template to use when notifying a pollution incident. This template is available on the Water Directorate webpage and a copy is provided in **Appendix A**.

8.6 Notification to Neighbours

Irrespective of whether EPA directs Council to notify neighbours and depending on the circumstances of the particular pollution incident, Council may at their own discretion voluntarily choose to notify neighbours.

9 Minimising Harm to Persons on the Premises

9.1 Attendance Register

An attendance register is in place at the STP. All visitors are signed in and out of the site.

9.2 Site Induction

All visitors must report to the site office at Effluent Pump Shed where they are inducted to the site by the STP Operator prior to access to treatment areas of the site. No person who is not an employee or inducted contractor will be allowed to do work at site.

9.3 Staff Training

All staff should receive sufficient/appropriate training to enable them to undertake assigned duties in competent and safe manner. Training records such as for confined space entry, first aid etc. are maintained by Council's Human Resources Division.

All Sewer Operations staff are trained on PIRMP and whenever it is updated. Typical Record of Training on PIRMP is shown in Appendix B.

A toolbox meeting is carried-out every working day to discuss any issues related to safety and/or incidents among other issues. Record of the Tool Box meeting is reviewed by the Water and Sewer Coordinator.

9.4 Evacuation Procedure

Emergency evacuation procedures are provided in Council Procedure – RM-OP-19. The objective of this procedure is to ensure that Council staff and any visitors (including contractors) are evacuated safely from the STP in the case of an emergency.

9.5 Emergency Assembly Point

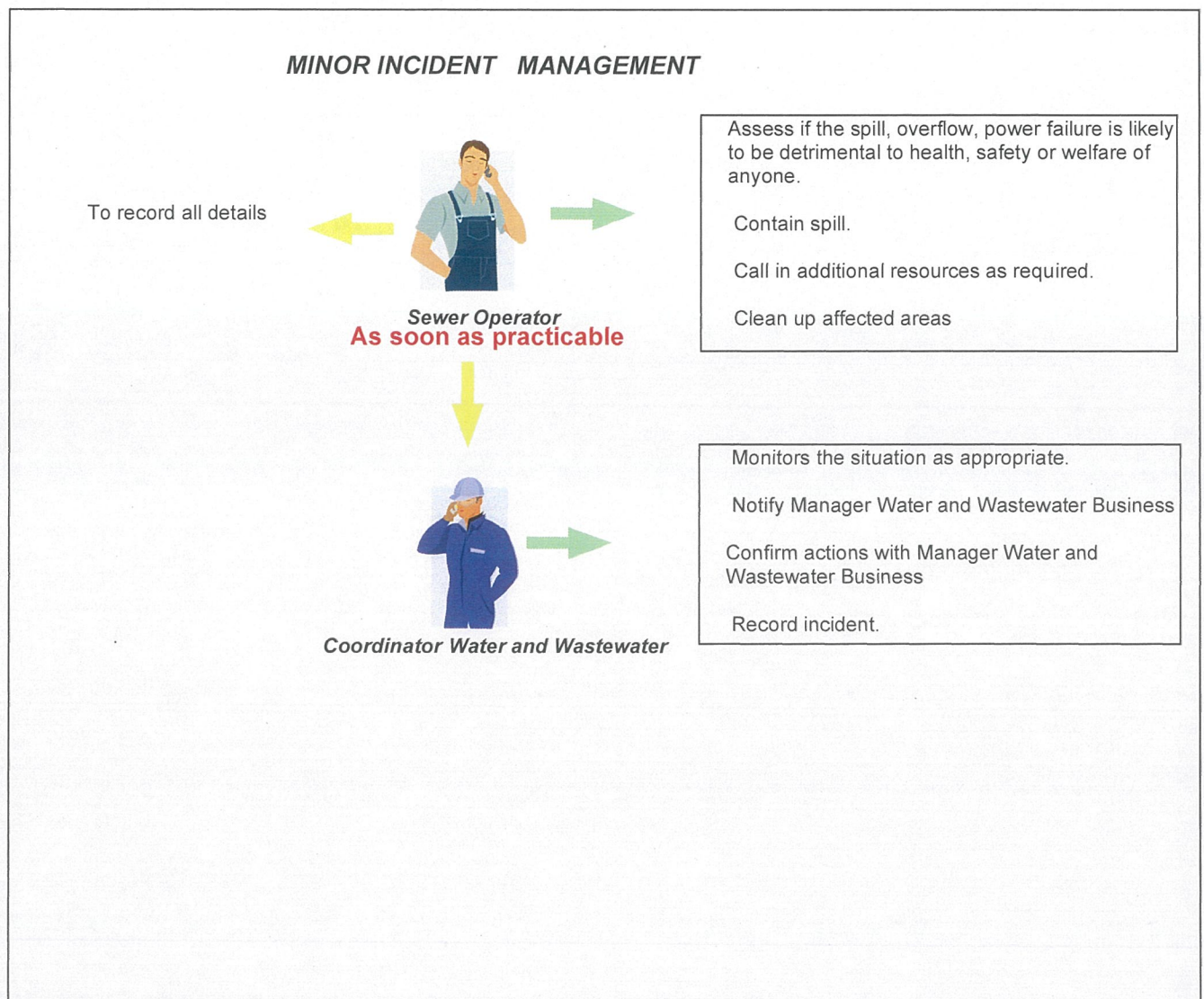
The assembly point, in the event of an emergency, is adjacent to the main entrance/exit gate near the Effluent Irrigation Pump Shed.

10 Actions to be Undertaken During or Immediately After a Pollution Incident

10.1 Minor Incident Action Plan

The action plan for the following minor incidents is shown in **Figure 11.1**.

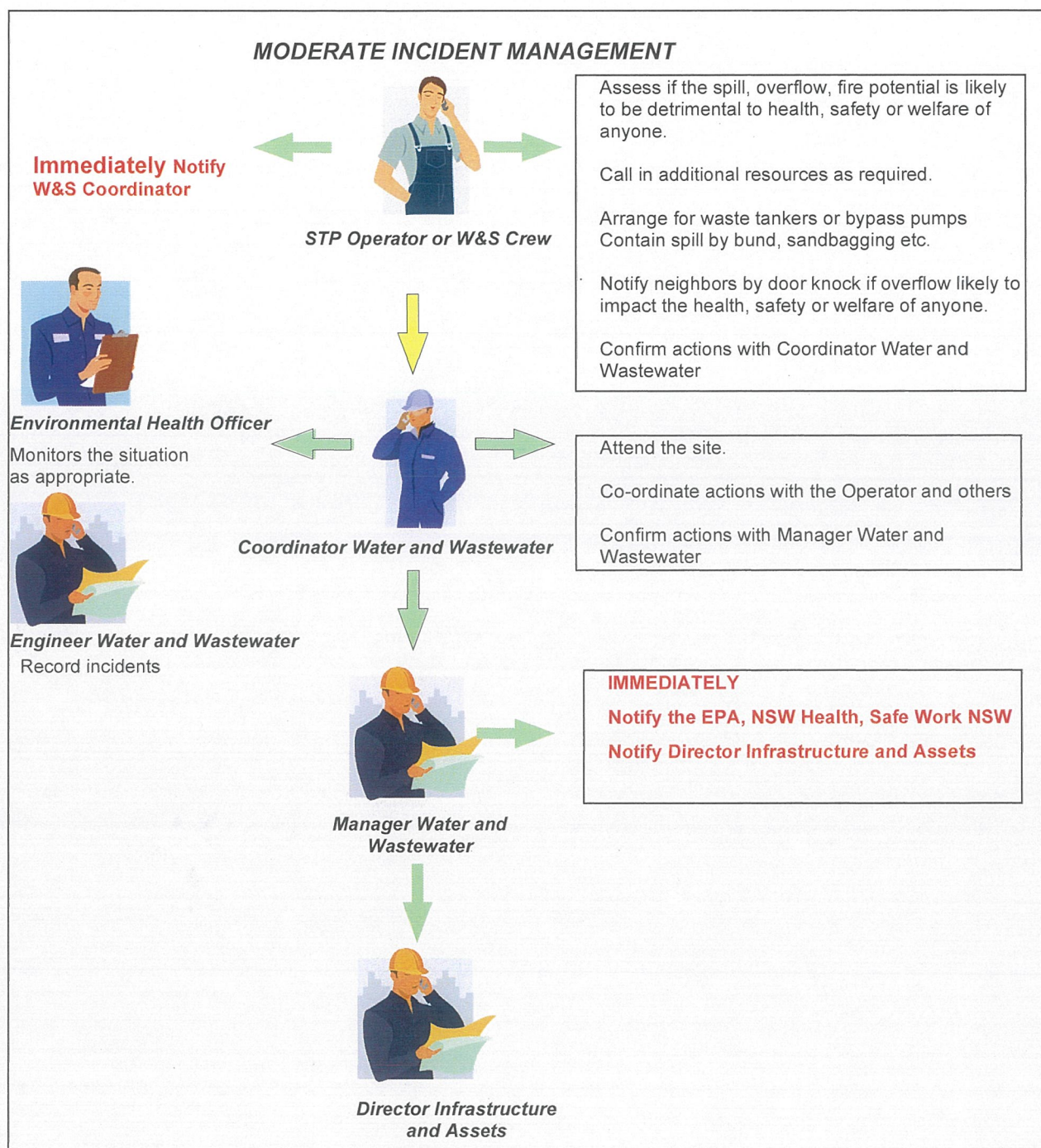
Figure 11.1 Minor Incident Action Plan



10.2 Moderate Incident Action Plan

The action plan for the following significant incidents is shown in **Figure 11.2**.

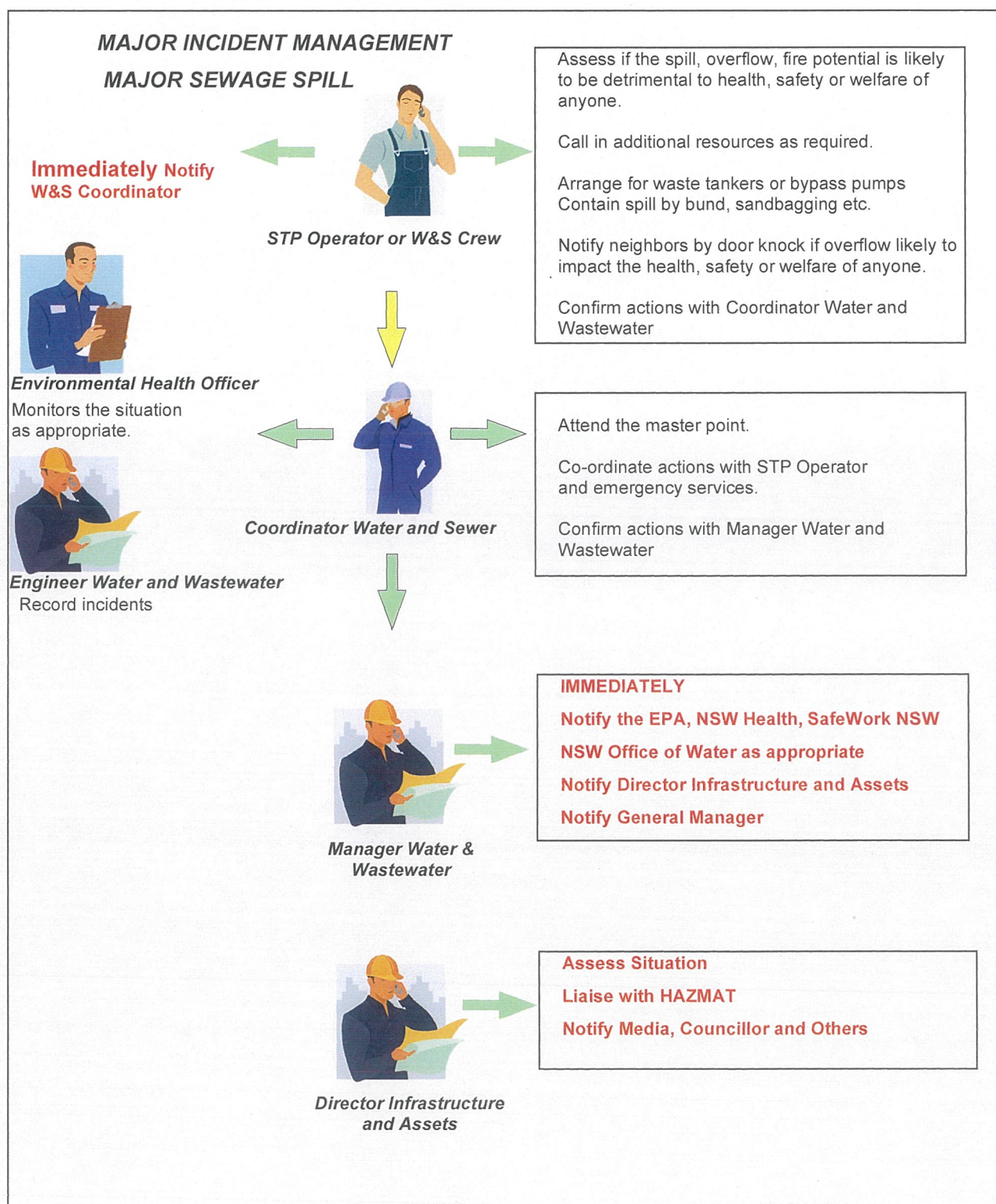
Figure 11.2 Moderate Incident Action Plan



10.3 Major Incident Action Plan

The action plan for the following significant incidents is shown in **Figure 11.3**.

Figure 11.3 Major Incident Action Plan



11 Evaluation, Audit and Review for Continuous Development

11.1 Evaluation and Review

A systematic review of the plan will be undertaken by the Water and Sewer Engineer annually or within one month of an incident occurring at the plant. The evaluation will:

- Assess the relevance of the risk assessment against the current state of the plant
- Identify any emerging problems and trends
- Assess the communication between Council, Council's operational staff and regulators
- Assist in determining priorities for improving procedures
- Assessment of incidents and responses determined
- Determine when and what is to be audited in the next six months.

Evaluation of results described above will be documented and the plan updated.

Evaluation will be reported to Council and stakeholders.

11.2 Auditing

Auditing of the pollutant inventory is to be done annually (Appendix C).

An audit may also be triggered by the following:

- A significant incident;
- Major change in treatment process; and
- Major expansion of sewerage system

12References

1. Yass Valley Council, Yass Valley Local Emergency Management Plan 2016
2. Department of Finance and Services, Yass STP Operation and Maintenance Manual, March 2010.
3. Yass Valley Council, Council Procedures Emergency Evacuation – Sewage Treatment Works, RM-OP-19, 28 September 2016.
4. NSW Environment Protection Authority, Environment Pollution Licence No.20844, November 2016.
5. Goulburn Mulwaree Council, Upper Lachlan Council and Yass Valley Council, Tablelands Regional Community Strategic Plan 2016-2036, 2016

13 Appendices

Appendix A – Incident Reporting Form

Incident Notification for sewerage spill or overflow



Dear DATE
 Overflow at EPA Ref #
 EPA Licence # of Sewerage Scheme.

Following our initial telephone call, we are advising you in writing (Refer to R4 of Licence) of more details of a sewage spill or overflow that Council experienced at am/pm on

The overflow was caused by

Once Council staff became aware of the overflow, the EPA and were notified immediately and corrective measures were put in place.

(Refer to Condition M9) of Licence: requires that Council record the following details in relation to each observed or reported overflow from the reticulation system and from the sewage treatment plant:

- a) The location of the overflow:
- b) The date, the estimated start time and estimated duration of the overflow:
- c) The estimated volume of the overflow (litres):
- d) A description of the receiving environment of the overflow:
- e) Classification as a dry or wet weather overflow:
- f) The probable cause of the overflow:
- g) Any actions taken to stop the overflow happening:
- h) Any action taken to clean up the overflow:
- i) Any actions taken to prevent the overflow happening again:

Additionally, sampling was undertaken at and the results of these samples are attached.

Yours faithfully,

NAME SIGNATURE DATE

APPROVED BY	GROUP	DOCUMENT ID	VERSION
ISSUED	REVISED	STATUS	PAGE
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Appendix B - PIRMP Training Register

PIRMP Training Details	Person(s) responsible	Personnel	Signature	Date
PIRMP January 2023	Ashik John	Aaron Shepherd		
	Aaron Shepherd	Ronald Witt		
	Ronald Witt	Xavier Macken		
	Ronald Witt	Alex Scorgie		
	Ronald Witt	Logan Hardy		

Appendix C – Audit Log Form

Auditor/ reviewer comment (System deficiency and non-compliances)	Scheme response	Corrective actions to prevent reoccurrence	Timetable for corrective/preventive action	Person(s) responsible	Completion Date

The report or form must be signed by Director Infrastructure and Assets

Following improvement measures are planned to be implemented.

- None at present.

Note: Annual review of sewage inflow is required to assess the timing for installation of Irrigation System and monitoring of effluent.