



Pollution Incident Response Management Plan

Goulburn Water Treatment Plant

Licence 1649

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Annual Review of PIRMP

Date of Review	Changes Made
01/05/2017	Incident reporting contact details updated
01/05/2018	No changes required
15/05/2019	Minor spelling changes
21/05/2020	Reviewed

1.0 Introduction

This pollution management response has been written for the Goulburn Water Treatment Plant to fulfil the requirement of preparing and implementing a pollution incident response management plan.

Under Part 5.7A of the *Protection of the Environment Operations Act 1997 (POEO Act)*, there is a requirement to prepare, keep, test and implement a pollution incident response management plan.

The objectives of the plan are to:

- Ensure comprehensive and timely communication about a pollution incident to staff at the premises, the Environment Protection Authority (EPA), the Water NSW, NSW Health, Goulburn Mulwaree Council and Fire and Rescue. Also, other people located near the facility who may be affected by the impacts of the pollution incident will be contacted.
- minimise and control the risk of a pollution incident at the facility by requiring identification of risks and the development of planned actions to minimise and manage those risks
- 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

2.0 Purpose

The purpose of the plan is to:

- Outline how the risk of a pollution incident will be minimise and controlled through the identification of risks and the development of planned actions to minimise and manage those risks.
- Document the notification protocol to ensure comprehensive and timely communication about a pollution incident is provided to all relevant stakeholders.
- Ensure the risks associated with the activity are mitigated, to ensure the protection of workers, community and the environment.
- Ensure compliance with all legislative requirements.

3.0 Scope

The Goulburn Water Treatment Plant is located at 233-235 Wheeo Road on the Western side of town on the edge of the City area. In close proximity to the plant is a retirement village, Trinity Secondary College and a number of rural residential properties.

The main entrance to the plant is located directly opposite River Street. There is another entrance to the plant approximately 120 metres past the first entrance, on Wheeo Road. The EPA Licence for this facility is 1649. The site is shown below in Figure 3.1. Figure 3.2 shows the location of the site.

Figure 3.1 – Goulburn Water Treatment Plant Layout

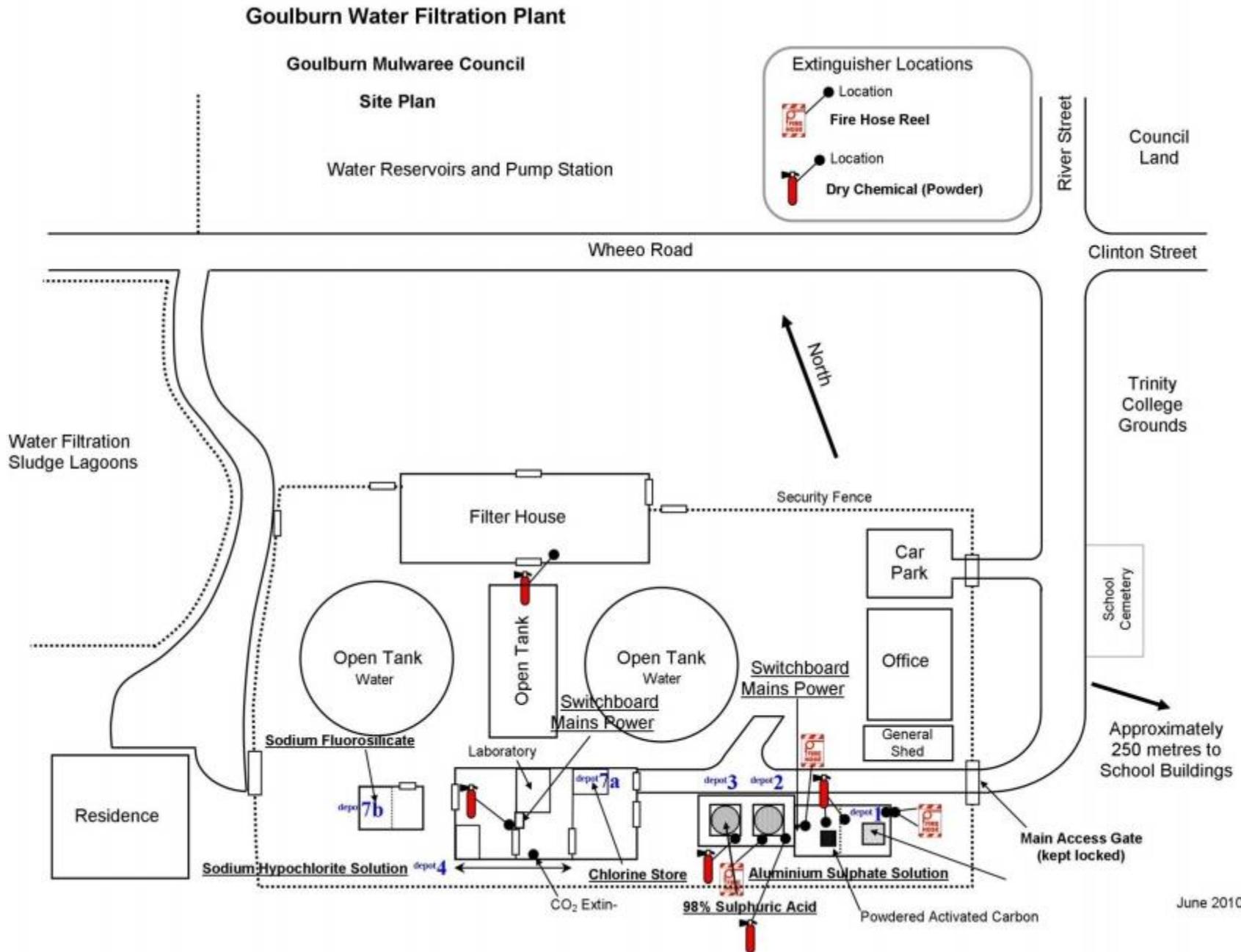
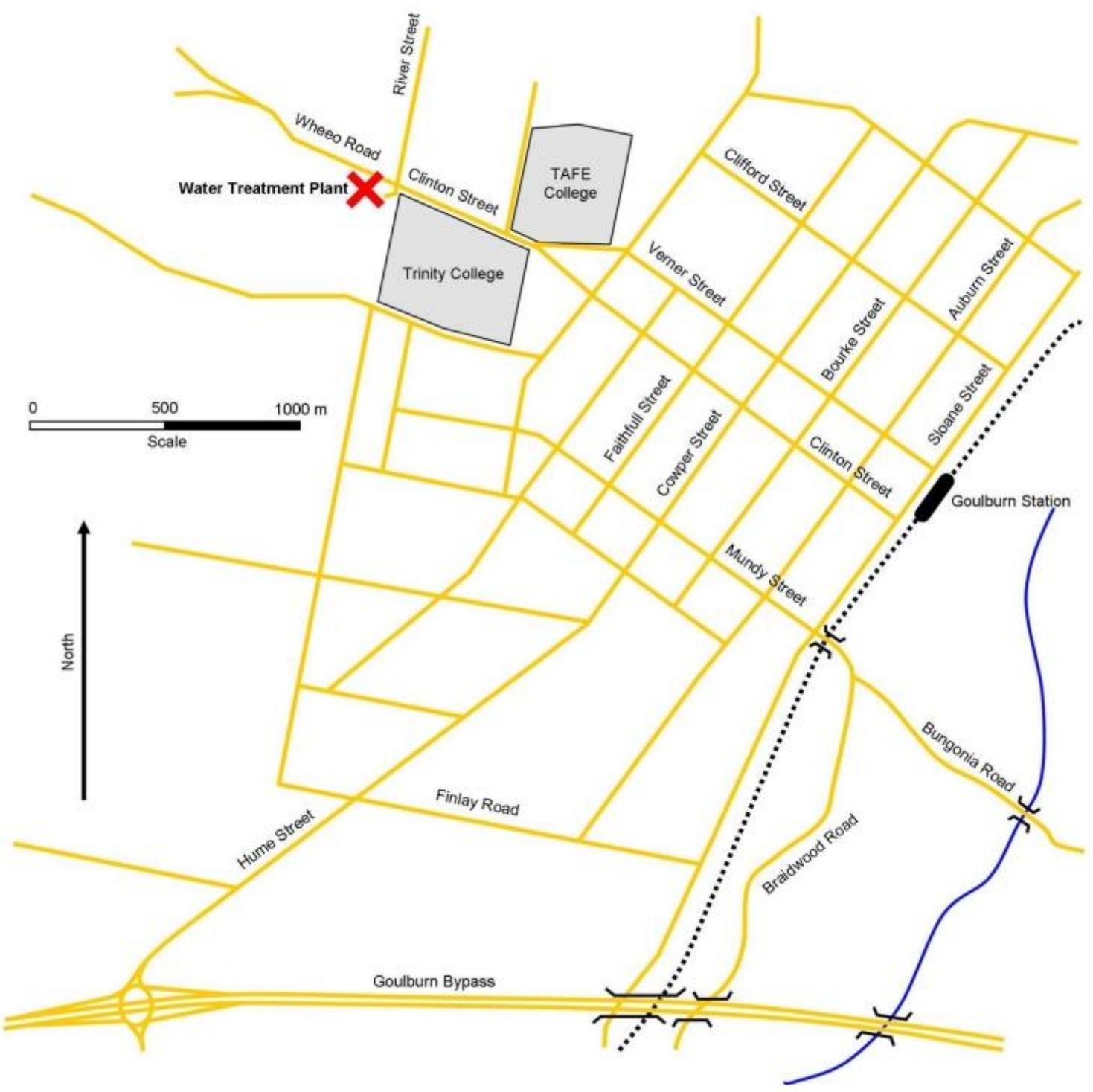


Figure 3.2 -

Location of Goulburn Water Treatment Plant



4.0 Incident Reporting

4.1 Incident Definition

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.

4.2 Legal Duty to Notify

It is the responsibility of all employees and contractors of Goulburn Mulwaree Council, who are engaged in any work activity at the Goulburn Water Treatment Plant, to notify the Site Supervisor (or their delegate) of all environmental incidents and hazards that may result in an environmental incident, regardless of the nature or scale of the incident.

4.3 Incident Reporting

Firstly, call 000 if the incident presents an immediate threat to human health or property. Fire and Rescue NSW, the NSW Police and the NSW Ambulance Service are the first responders, as they are responsible for controlling and containing incidents.

If the incident does not require an initial combat agency, or once the 000 call has been made, Any incident that may cause or threaten material harm to the environment shall be communicated to the following agencies immediately by the Water Treatment supervisor or another staff member present or the on-call staff member (for after hours):

- | | |
|---|----------------------------------|
| 1. EPA Environment Line | 131 555 |
| 2. Water NSW Incident Line | 1800 061 069 |
| 3. NSW Health | 4824 1842 or 0407 060 237 |
| 4. GMC Environmental Services | 4823 4454 |
| 5. Fire and Rescue | 1300 729 579 |
| 6. Safe Work NSW (for a notifiable incident) | 131050 |

For the EPA and SCA – these are both incident lines. The incident gets reported to the appropriate officer who will call back and seek further information.

For NSW Health – the contact person is Tabitha Holliday.

For GMC Environmental Services, Sarah Walsh is the contact.

The information required to be reported includes:

- The time and date of the incident
- The nature of the incident and the expected duration of the event
- The location of the incident and the place where the pollution is occurring or likely to occur;
- The estimated quantity or volume of any discharge and the concentration of any pollutants involved;
- The circumstances in which the incident occurred;
- The action(s) taken or proposed to deal with the incident and any resulting pollution or threatened pollution; and
- Name and contact details of the person reporting the incident
- Any other information requested.

A written report must be submitted to the EPA within 7 days about the incident as required by the licence.

For Safe Work NSW, a notifiable incident is the death of a person; serious injury or illness of a person; or a dangerous incident.

5.0 Description and Likelihood of Hazards

5.1 Chemicals Stored at the Site

The following dangerous goods are stored at the site in the following quantities:

Chemical	Class	UN	Storage Capacity	Typical Quantity Stored
Sulphuric Acid 98%	8	UN 1830	25,000 litres	Generally zero unless being used then up to 3,000 litres
Hypochlorite Solution (liquid chlorine)	8	UN 1791	2,000 litres	1,500 litres
Chlorine (Gas chlorine)	2.3	UN 1017	2,760 kg	2,760 litres
Sodium fluorosilicate (Fluoride)	6.1	UN 2674	2,000 kg	1,500 kg

The following additional chemicals are stored at the site:

Chemical	UN	Storage Capacity	Typical Quantity Stored
Aluminium Sulphate (Alum)	1760	50,000 litres	Up to 45,000 litres
Soda Ash	None	30 tonne	Up to 25 tonne
Powdered Activated Carbon (PAC)	None		1 tonne
Potassium permanganate	1490		2 drums = 50 kg
Polymer - Flopam	None		2 bags = 50 kg

5.2 Types of Hazards

6.2.1 Sulphuric Acid 98%

The sulphuric acid is stored a stainless steel storage tank and stainless steel day tank. This is in a purpose built area with a chemically treated bund, to withstand the high acid strength and contain any spill. The area drains to a sump that remains contained within the bund and then requires manual removal from the bund.

The main emergency that would be experience with sulphuric acid is leakage from the tank, valve work or transfer pipes between the storage tank and the day tank. Any leakage from the sulphuric acid equipment would be contained within the bund.

Action for a Sulphuric Acid Leak

The sulphuric acid tank is generally kept at low levels due to the infrequent requirement to use acid for pH control in the water treatment process. Any leak from the tank, valves or dosing equipment is designed to be contained within the bund. This bund was designed to contain 110% volume from the full storage capacity and has been coated specifically for use with sulphuric acid.

Any spills are contained within the bunded area and collected in the sumps. This is diluted by operators and transferred into appropriate containers for disposal by a licenced chemical contractor.

5.2.2 Chlorine

The chlorine gas is stored in three (3) 920 kg cylinders in a specifically built chlorination unit. This unit is fitted within the chemical building (the main colourbond building). The unit allows two chlorine cylinders to be connected with one online and the other in standby mode. The dosing equipment is fitted with a vacuum regulator on the changeover unit that is mounted on each cylinder. The chlorine delivery lines work under positive pressure. This means that if the line breaks, the cylinder shuts off preventing the release of chlorine gas.

The room is fitted with black heaters, a ventilation fan (that extracts air and releases it immediately through the wall and out of the building) and a chlorine gas detector. The gas detector detects any chlorine fumes and is fitted with a siren and a light that is both audible and visible throughout the plant.

A wind sock is located immediately outside of the plant room to enable the determination of wind direction in the case of emergency.

Action for a Chlorine Leak

The chlorine leak should be managed as per the Emergency Management Plan for the WTP as lodged with the NSW Fire Brigade and also stored in at the Gate. This details the evacuation of the site, further investigation with breathing apparatus , how to slow the movement of the chlorine plume and they NSW Fire Brigade managing the incident.

5.2.3 Other Chlorine Emergencies that Could Occur

1. Fire – in the event of fire in the chemical building, the fire brigade should be called for specialist fire fighting.
2. Explosions – the tanks can withstand certain pressure, however, a BA should be worn and if possible the chlorine tanks should be checked to determine any leaks.
3. Cylinder valve broken – Orica should be called on 1800 033 111 for advice how to stop the chlorine from leaking.
4. Earthquake – may break the chlorine delivery line. Due to the positive pressure of the cylinder, this would shut down the cylinder and stop dosing.
5. Cylinder Impact – this may happen during delivery or being hit in the building while being stored ready for use. In the event of the cylinder being hit, staff are to remove themselves from the area, get the BA out from either the chemical building or the filter building and examine the cylinder. Specialist advice should be sought if there is damage to the cylinder.
6. Tampering with the cylinder – the site is locked however in the event of tampering, the BA should be worn and the cylinder investigated to determine the problem with the cylinder and the cylinder turned off. The scenario for a leak should be following if a leak is detected.

5.2.4 Other Chemical Spills

Minor spills at the water treatment plant are unlikely to pose a serious threat to the environment. However, all spills, whether major or minor, must be managed so as to minimise the potential for environmental harm.

- **Minor Spill:** either clean up manually ensuring suitable PPE is worn (gloves, disposable overalls, eye protection, waterproof boots), following the instructions in the MSDS.
- **Major Spills:** clean spill using the precautions of the MSDS and do not allow spillage to flow off the site.

In the event that spillage migrates off the site, activate the environmental reporting procedures.

5.3 Other Reportable Incidents

- Extreme Rainfall - During periods of extreme rainfall, additional stormwater may flow into the River Street Dam that could exceed the 200KL / day discharge limit from the licenced discharge point. In the event of the limit being exceeded, the EPA must be advised of flow exceedances.
- Discharge Exceeds Approved Limits - Given the nature of the backwash water and resulting stormwater that also enters the dam, it is unlikely that the discharge will exceed approved quality limits of discharge unless there has a major spill near the truck-fill point. In this case of a spill, the site should be cleaned to prevent materials from entering the dam.