Potentially Hazardous and Potentially Offensive Industry Risk Screen

GPV Charlestown Pty Ltd

Health Services Facility and Pharmacy
31-33 Smith Street, Charlestown NSW

April 2023

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Executive Summary

GPV Charlestown Pty Ltd (GPV) is proposing to develop a Health Services Facility that comprises a medical centre, pharmacy and private hospital, at 31-33 Smith Street, Charlestown.

The Proposed Development meets the criteria of Regionally Significant Development, and the Hunter Central Coast Regional Planning Panel is the consent authority. As such, the Hunter Central Coast Regional Planning Panel has requested that a risk screen is carried out to assess whether the Proposed Development is considered a potentially hazardous and potentially offensive industry under Chapter 3 of the *State Environmental Planning Policy (Resilience and Hazards)* 2021 (formerly referred to as SEPP 33).

Wilson Planning Pty Ltd, on behalf of GPV Charlestown Pty Ltd, has requested Opterra Pty Ltd conduct a risk screen (assessment) under the Resilience and Hazards SEPP for the Proposed Development.

A review of the quantities of dangerous goods (DGs) proposed to be stored as part of the Proposed Development has been conducted and compared to the threshold quantities outlined in *Hazardous and Offensive Development Application Guidelines - Applying SEPP 33* (NSW Department of Planning, 2011). The results of this assessment indicate that the quantities of DGs to be stored and transported do not exceed the threshold quantities specified by *Hazardous and Offensive Development Application Guidelines - Applying SEPP 33.*Therefore, Chapter 3 of the Resilience and Hazards SEPP does not apply to the Proposed Development.

As the facility does not meet the definition of a potentially hazardous and potentially offensive industry under the Resilience and Hazards SEPP a Preliminary Hazard Analysis for the Proposed Development is not required.

The following recommendations have been made for the Proposed Development:

- The DGs shall be stored in a manner which complies with the relevant and applicable storage standards, including but not limited to:
    - AS/NZS 3833:2007 *The storage and handling of mixed classes of dangerous goods, in packages and intermediate bulk containers; and*
    - AS 4332-2004 *The storage and handling of gases in cylinders*.
- An assessment against the placard and manifest thresholds from the Work Health and Safety Regulation 2017 should be carried out. If the DGs stored at a particular site exceed the placard or manifest thresholds, then additional requirements apply. When placarding thresholds are exceeded, specific signage is required at the site entries and at building entrances and storage areas. When manifest thresholds are exceeded, a manifest must be prepared, SafeWork NSW must be notified, and Fire and Rescue NSW must be consulted regarding emergency plans for the site.

1. Introduction

GPV Charlestown Pty Ltd (GPV) is proposing to develop a Health Services Facility (Proposed Development) that comprises a medical centre, pharmacy and private hospital, at 31-33 Smith Street, Charlestown (the Site).

The Proposed Development will consist of a 3-storey, split-level car park and a 4-storey health services building.

The Site, which is located in the central business district of Charlestown, is shown in Figure 1.1.

Figure 1.1. Site Location (Source: NearMap)

The Site is surrounded by the following land uses (as depicted in Figure 1.2):

- To the north – multi storey commercial building and McDonalds restaurant
- To the east – Charlestown Public School and single storey medical suites
- To the south – multi storey commercial developments
- To the west – two service stations, commercial development and sporting fields.

Figure 1.2. Surrounding Land Use (Source: Wilson Planning Pty Ltd).

The Proposed Development meets the criteria of Regionally Significant Development (RSD), and the Hunter Central Coast Regional Planning Panel (HCCRPP) is the consent authority. As such, the HCCRPP has requested that a risk screen is carried out to assess whether the Proposed Development is considered a potentially hazardous and potentially offensive industry under the *State Environmental Planning Policy (Resilience and Hazards)* 2021 (Resilience and Hazards SEPP) (formerly SEPP 33).

Wilson Planning Pty Ltd (Wilson Planning), on behalf of GPV, has requested Opterra Pty Ltd (Opterra) conduct a risk screen (assessment) under the Resilience and Hazards SEPP for the Proposed Development.

This report presents the findings of the assessment, which has been carried out in accordance with *Hazardous and Offensive Development Application Guidelines - Applying SEPP 33* (NSW Department of Planning, 2011) (Applying SEPP 33).

1.1. Objective

The objective of this assessment is to establish whether the Proposed Development is considered a potentially hazardous and potentially offensive industry and whether a Preliminary Hazard Assessment (PHA) is required for the Proposed Development. This report documents the basis for the decision.

2. Background

The Resilience and Hazards SEPP is used in New South Wales to regulate the planning approval process for developments in hazardous and offensive industries, and potentially hazardous and potentially offensive industries.

The Resilience and Hazards SEPP commenced on 1 March 2022 and consolidates a number of State Environmental Planning Policies, including:

- *State Environmental Planning Policy No. 55 – Remediation of Land*;
- *State Environmental Planning Policy (Coastal Management)* 2018; and
- *State Environmental Planning Policy No. 33 – Hazards and Offensive Development*.

State Environmental Planning Policy No. 33 – Hazards and Offensive Development (SEPP 33) was previously used as the basis for assessing whether a development fell under the policy's definition of "potentially hazardous industry" or "potentially offensive industry". This is now covered under Chapter 3 of the Resilience and Hazards SEPP.

No policy changes were made under the consolidation of SEPP 33 into the Resilience and Hazards SEPP. The screening process used to assess whether a development is "potentially hazardous" or "potentially offensive" remains applicable. The screening process used to assess whether the Resilience and Hazards SEPP applies (in the context of potentially hazardous or potentially offensive industry) is documented in the *Hazardous and Offensive Development Application Guidelines - Applying SEPP 33* (Applying SEPP 33).

Figure 1 (The SEPP 33 Process) of Applying SEPP 33 is reproduced in Figure 2.1. The scope of this assessment is shown by the yellow outline.

The Resilience and Hazards SEPP defines "potentially hazardous industry" as follows:

> *…a development for the purposes of any industry which, if the development were to operate without employing any measures (including, for example, isolation from existing or likely future development on other land) to reduce or minimise its impact in the locality or on the existing or likely future development on other land, would pose a significant risk in relation to the locality—*
>
> *(a) to human health, life or property, or*
>
> *(b) to the biophysical environment,*
>
> *and includes a hazardous industry and a hazardous storage establishment.*

To determine whether a proposed development is potentially hazardous, the risk screening process in Applying SEPP 33 considers the type and quantity of "hazardous materials" to be stored at the Site and the distance of the storage area to the nearest site boundary, as well as the expected number of transport movements.

"Hazardous materials" are defined within Applying SEPP 33" as:

> *…substances falling within the classification of the Australian Code for Transportation of Dangerous Goods by Road and Rail (Dangerous Goods Code).*

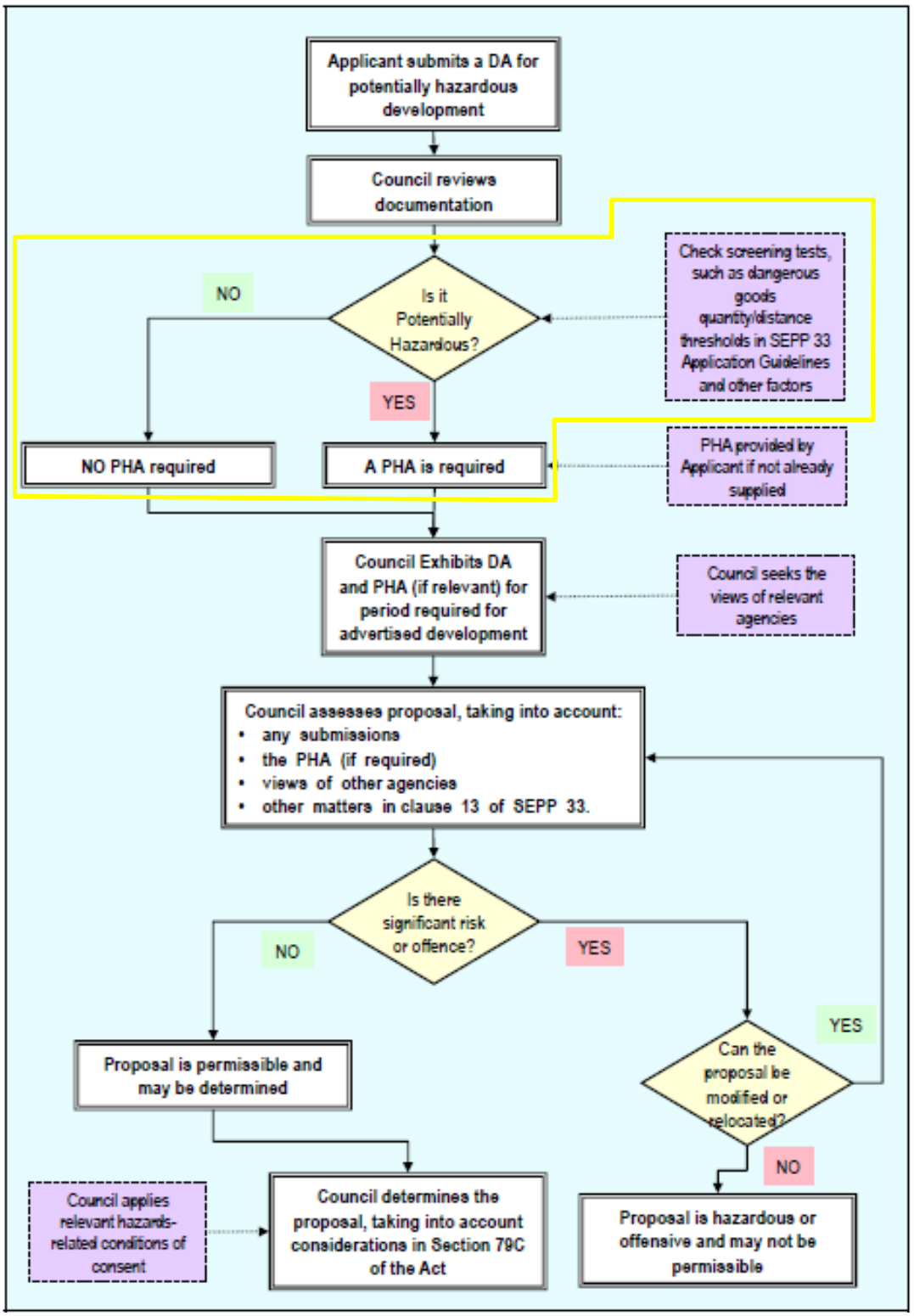

Figure 2.1. The SEPP 33 Process

2.1. Overview of this assessment

This assessment consists of the following stages:

- Review the types of materials to be stored at the Site and determine whether those materials are considered Dangerous Goods (DGs);
- Review the types and proposed quantities of any DGs to be stored at the Site;
- Compare the quantities of DGs against the threshold quantities listed in Applying SEPP 33 to identify whether the storage location or quantity triggers the Proposed Development as a potentially hazardous industry;
- Review the likely vehicular movements involving DGs and compare against the applicable thresholds detailed in Applying SEPP 33; and
- Report on the findings of the assessment.

3. Material assessment

A manifest of materials to be stored at the Site as provided by Wilson Planning Pty Ltd includes:

- 8 x compressed air cylinders;
- 3 x medical carbon dioxide cylinders;
- 6 x medical nitrous oxide cylinders;
- 6 x medical air cylinders; and
- 30 x medical oxygen cylinders.

The following assumptions about the materials to be stored at the Site have been made:

- Compressed air is used for the operation of pneumatic tools.
- Medical carbon dioxide (100% carbon dioxide) is used as a respiratory stimulant and is used together with medical oxygen to stimulate breathing response.
- Medical nitrous oxide (100% nitrous oxide) is used as an anaesthetic and analgesic agent for pain relief.
- Medical air (79% nitrogen and 21% oxygen) is used for respiratory assistance in intensive care units and neonatal intensive care units.
- Medical oxygen (100% oxygen) is a medical gas required in every healthcare setting and is used for resuscitation and inhalation therapy.
- All gas cylinders are G size which have dimensions of 780mm high x 204mm diameter, and a weight of 54Kg.

A number of other products used in the medical setting may also be classified as DGs and likely to be stored in small quantities. This assessment excludes any other DGs not listed above that may be stored as part of the Proposed Development. The risk posed by these small quantities is significantly lower than the manifest DGs stored at the Site. Should it be determined that other DGs to be stored at the Site are of significant quantity, this assessment should be reviewed and amended as appropriate.

3.1. Assessment of manifest materials as Dangerous Goods

A dangerous good is a substance, mixture or article that meets the criteria of, or is listed in, the most current version of Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code). The ADG Code sets out the requirements for transporting DGs by road or rail.

The ADG Code categorises DGs into 9 classes according to their physical and chemical properties and the risks that they present. Classes range from Class 1 Explosives to Class 9 Miscellaneous Dangerous Substances and Articles. The ADG also designates DGs into one of three hazard groups (packing groups), in decreasing order of hazard, by the Roman numerals 'I' (high danger), 'II' (medium danger) and 'III' (low danger)

The dangerous goods classification for the manifest has been summarised in Table 3.1 below.

Table 3.1. Summary of assigned ADG Code classification.

Manifest Material	Information from ADG Code			
	Name	Class or Division (Subsidiary Hazard)	Packing Group	Description
Compressed air	Air, Compressed	2.2	n/a	Non-flammable, non-toxic gases
Medical carbon dioxide	Liquefied gases, non-flammable, charged with nitrogen, carbon dioxide or air	2.2	n/a	Non-flammable, non-toxic gases
Medical nitrous oxide	Nitrous oxide	2.2 (5.1)	n/a	Non-flammable, non-toxic gases Oxidising substances
Medical air	Air, Compressed	2.2	n/a	Non-flammable, non-toxic gases
Medical oxygen	Oxygen, Compressed	2.2 (5.1)	n/a	Non-flammable, non-toxic gases Oxidising substances

3.2. Quantities of Dangerous Goods stored and handled

The majority of DGs to be stored at the Site are Class 2.2 non-flammable, non-toxic gases. A lesser amount of Class 5.1 oxidising substances will also be stored at the Site. A summary of the classes and quantities of DGs to be stored at the Site is provided in Table 3.2.

Table 3.2. Quantities of dangerous goods stored and handled.

Class or Division (Subsidiary Hazard)	Description	Packing Group	Quantity (kg)
2.2	Non-flammable, non-toxic gases	n/a	918
2.2 (5.1)	Non-flammable, non-toxic gas with oxidising sub risk	n/a	1,944

3.3. Storage location for Dangerous Goods

Figure 3.1 provides a layout for the Proposed Development and the proposed location of DG storage.

Figure 3.1. Site layout and location of DG storage as shown by a yellow box.

4. Applying SEPP33

4.1. Introduction

Table 4.1 has been extracted from Applying SEPP 33 and provides details on the applicable method from within Applying SEPP 33 to determine the applied screening threshold for each respective class of DG to be stored at the Site (Table 1 of Applying SEPP33).

Table 4.1. Applicable screening method for each respective class of DG to be stored at the Site (Source: Table 1 of Applying SEPP33).

Class	Description	Method To Assess Quantity Thresholds (Applying SEPP 33 References)	Method To Assess Transportation (Applying SEPP 33 References)
2.2	Non-flammable, non-toxic gases	n/a	n/a
5	Oxidisers, organic peroxides	Table 3	Table 2

Table 4.2 indicates the Applying SEPP 33 general screening threshold quantities for DG storage (Table 3 of Apply SEPP33).

Table 4.2. General screening threshold quantities (Source: Table 3 of Applying SEPP33). Bold values indicate those applicable to this assessment.

Class or Division	Description	Screening Threshold Quantity (kg)
2.2	n/a	n/a
5.1	ammonium nitrate — high density fertiliser grade, kept on land zoned rural where rural industry is carried out, if the depot is at least 50 metres from the site boundary	25,000
	ammonium nitrate — elsewhere	5,000
	dry pool chlorine — if at a dedicated pool supply shop, in containers <30 kg	2,500
	dry pool chlorine — if at a dedicated pool supply shop, in containers >30 kg	1,000
	any other class 5.1	**5,000**

Table 4.3 indicates the Applying SEPP 33 general screening thresholds for vehicular movements (Table 2 of Applying SEPP33).

Table 4.3.Transport screening thresholds (Source: Table 2 of Applying SEPP33). Bold values indicate those applicable to this assessment.

Class	Description	Vehicle Movements		Minimum Quantity Per Load (kg)	
		Cumulative Annual	Peak Weekly	Bulk	Packages
2.2	Non-flammable, non-toxic gases	n/a		n/a	
5	Oxidisers, organic peroxides	**>500**	**>30**	2,000	**5,000**

4.2. Storage assessment

Threshold limits for the application of SEPP 33 are presented in Table 4.4 indicating the maximum quantity that can be stored at the Site for each class. It is noted that Class 2.2 DGs are not subject to risk screening for SEPP 33. Substances with sub risks are assessed against the thresholds of both DG classes they belong to.

Table 4.4. Quantities of dangerous goods stored and Applying SEPP 33 thresholds.

Class or Division (Subsidiary Hazard)	Description	Packing Group	Quantity (kg)	Apply SEPP33 Threshold (kg)	Does SEPP 33 Apply?	Minimum Quantity Per Load (kg)
2.2	Non-flammable, non-toxic gases	n/a	2,862	n/a	No	n/a
2.2 (5.1)	Non-flammable non-toxic gas with oxidising sub risk	n/a	1,944	5,000	No	5,000

4.3. Transport assessment

The quantities to be stored are less than SEPP 33 as shown in Table 4.4. A high turnover of stored product would be required to exceed the acceptable vehicular movements associated with the corresponding storage (>30 peak vehicle movement per week or >500 cumulative per year). Therefore, it is considered that the transport screening thresholds of Apply SEPP 33 would not be exceeded by the Proposed Development.

5. Conclusion and Recommendations

5.1. Conclusion

A review of the quantities of DGs proposed to be stored as part of the Proposed Development has been conducted and compared to the threshold quantities outlined in Applying SEPP 33. The results of this assessment indicate that the quantities of DGs to be stored and transported do not exceed the threshold quantities specified by Applying SEPP 33. Therefore, Chapter 3 of the Resilience and Hazards SEPP does not apply to the Proposed Development.

As the facility does not meet the definition of a potentially hazardous and potentially offensive industry under the Resilience and Hazards SEPP a Preliminary Hazard Analysis for the Proposed Development is not required.

5.2. Recommendations

The following recommendations have been made for the Proposed Development:

- The DGs shall be stored in a manner which complies with the relevant and applicable storage standards, including but not limited to:
    - AS/NZS 3833:2007 *The storage and handling of mixed classes of dangerous goods, in packages and intermediate bulk containers; and*
    - AS 4332-2004 *The storage and handling of gases in cylinders*.
- An assessment against the placard and manifest thresholds from the Work Health and Safety Regulation 2017 should be carried out. If the DGs stored at a particular site exceed the placard or manifest thresholds, then additional requirements apply. When placarding thresholds are exceeded, specific signage is required at the site entries and at building entrances and storage areas. When manifest thresholds are exceeded, a manifest must be prepared, SafeWork NSW must be notified, and Fire and Rescue NSW must be consulted regarding emergency plans for the site.

5.3. Closure

If you have any questions, please do not hesitate to contact Opterra on 0427 835 607 or rylan@opterra.com.au.

Regards,

Rloemker

Rylan Loemker
Director and Occupational Hygienist

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