



State Environmental Planning Policy (Resilience and Hazards)

St George Private Hospital Expansion at 119 – 129 Princes Highway and
2 Hogben Street, Kogarah, and 1 South Street, Kogarah

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Quality Management

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A	1 October 2025	Draft issue for comment	Renton Parker	Jason Costa
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Executive Summary

Background

This State Environmental Planning Policy – Resilience & Hazards (SEPP-RH) report has been prepared on behalf of Akalan Projects Pty Ltd in support of a State Significant Development Application (SSDA) submitted to the Department of Planning, Housing and Infrastructure (DPHI) under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act 1979).

The SSDA seeks approval for the expansion of the St George Private Hospital. Specifically, the SSDA seeks consent for two components: the first being the erection of a health services facility (hospital), and the second relating to upgrades to the main hospital campus, including a new emergency department.

For reporting purposes, the site subject to the new health services facility (hospital) is referred to herein as the 'clinical tower site' and the main hospital campus is referred to as such.

This report provides an assessment of the Hazards and Risks preliminary risk screening and responds to the Secretary's Environmental Assessment Requirements (SEARs) issued by DPHI on 30 June 2025 in relation to the project.

Conclusions

A review of the quantities of DGs stored at the proposed facility and the associated vehicle movements was conducted and compared to the threshold quantities outlined in Chapter 3 of SEPP (Resilience and Hazards). The results of this analysis indicates the threshold quantities for the DGs to be stored and transported are not exceeded; hence, the Chapter 3 of SEPP (Resilience and Hazards) does not apply to the project. Furthermore, a review of the potential to cause offense was conducted which indicated the site operations would be unlikely to result in noise or odour to occur at levels which would cause offense.

As the facility is not classified as potentially hazardous or offensive, it is not necessary to prepare a Preliminary Hazard Analysis for the facility as Chapter 3 of SEPP (Resilience and Hazards) does not apply.

Recommendations

Notwithstanding the findings of this assessment, the following recommendations have been made:

- The liquid oxygen tank shall be subject to assessment against AS 1894:2025 to confirm separation requirements, ventilation, impact protection, etc.
- The gas cylinder store(s) shall be subject to assessment against AS 4332:2004 to confirm separation requirements, ventilation, segregation, etc.

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Abbreviations

Abbreviation	Description
ADG	Australian Dangerous Goods Code
DA	Development Application
DGs	Dangerous Goods
DPHI	Department of Planning, Housing, & Infrastructure
RH	Resilience and Hazards
SEARs	Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy

1.0 Introduction

1.1 Background

This State Environmental Planning Policy – Resilience & Hazards (SEPP-RH) report has been prepared on behalf of Akalan Projects Pty Ltd in support of a State Significant Development Application (SSDA) submitted to the Department of Planning, Housing and Infrastructure (DPHI) under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act 1979).

The SSDA seeks approval for the expansion of the St George Private Hospital. Specifically, the SSDA seeks consent for two components: the first being the erection of a health services facility (hospital), and the second relating to upgrades to the main hospital campus, including a new emergency department.

For reporting purposes, the site subject to the new health services facility (hospital) is referred to herein as the 'clinical tower site' and the main hospital campus is referred to as such.

This report provides an assessment of the Hazards and Risks preliminary risk screening and responds to the Secretary's Environmental Assessment Requirements (SEARs) issued by DPHI on 30 June 2025 in relation to the project.

1.2 Scope of Services

The scope of work is to prepare a SEPP-RH assessment for the St Georges Private Hospital development at 119 – 129 Princes Highway and 2 Hogben Street, Kogarah, and 1 South Street, Kogarah. The assessment does not include any other sites nor the preparation of any additional planning studies should they be required.

1.3 Qualifications of the Assessor

The assessment has been performed by Renton Parker who is the Managing Director at Riskcon Engineering Pty Ltd. Renton is a chartered chemical engineer with 13 years of experience working the field of risk engineering dealing specifically with Dangerous Goods consulting. He is a full member of the Australasian Institute of Dangerous Goods Consultants (AIDGC) in addition he has held roles as President, Vice President and Board Member of the AIDGC. He is a listed hazards and risk consultant under the Three Ports SEPP. Renton has performed numerous risk, DG, and fire assessments for industrial facilities storing DGs and other materials with unique hazards ranging from minor storage below SEPP-RH up to Major Hazard Facilities.

2.0 Methodology

2.1 General Methodology

The methodology used in this assessment is as follows:

- Review the types and proposed quantities of DGs to be stored at the site.
- Compare the quantities of DGs the threshold quantities listed in “Applying SEPP 33 – Hazardous and Offensive Development” (Ref. [1]) to identify whether the storage location or quantity triggers SEPP-RH.
- Review the likely vehicular movements involving DGs and compare against the applicable thresholds detailed in Applying SEPP 33 (Ref. [1]).
- Report on the findings of the SEPP-RH assessment.

2.2 Data taken from “Applying SEPP 33”

State Environmental Planning Policy – Resilience & Hazards(SEPP-RH) has been developed under the Planning and Assessment Act 1979 to control potentially hazardous and offensive developments and to ensure appropriate safety features are installed at a facility to ensure the risks to surrounding land uses is minimised.

The policy includes a guideline that assists government and industry alike in determining whether SEPP-RH applies to a specific development. The guideline, “Applying SEPP 33 - Hazardous and Offensive Developments” (Ref. [1]) provides a list of threshold levels, for the storage of DGs, above which the regulator considers the DG storage to be potentially hazardous. In the event the threshold levels are exceeded, SEPP-RH applies and a Preliminary Hazard Analysis (PHA) is required, followed by a series of hazard analysis studies.

Figure 2-1, extracted from “Applying SEPP 33” provides details on the application of Figures or Tables from the same document to determine the applied screening Threshold (Ref. [1]).

Class	Method to Use/Minimum Quantity
1.1	Use graph at Figure 5 if greater than 100 kg
1.2-1.3	Table 3
2.1 — pressurised (excluding LPG)	Figure 6 graph if greater than 100 kg
2.1 — liquefied (pressure) (excluding LPG)	Figure 7 graph if greater than 500 kg
LPG (above ground)	table 3
LPG (underground)	table 3
2.3	table 3
3PGI	Figure 8 graph if greater than 2 tonne
3PGII	Figure 9 graph if greater than 5 tonne
3PGIII	Figure 9 graph if greater than 5 tonne
4	table 3
5	table 3
6	table 3
7	table 3
8	table 3

Figure 2-1: Screening Method to be Used

Table 3 from “Applying SEPP 33” has been extracted and is shown in **Figure 2-2**.

Class	Screening Threshold	Description
1.2	5 tonne	or are located within 100 m of a residential area
1.3	10 tonne	or are located within 100 m of a residential area
2.1	(LPG only — not including automotive retail outlets ¹)	
	10 tonne or 16 m ³	if stored above ground
	40 tonne or 64 m ³	if stored underground or mounded
2.3	5 tonne	anhydrous ammonia, kept in the same manner as for liquefied flammable gases and not kept for sale
	1 tonne	chlorine and sulfur dioxide stored as liquefied gas in containers <100 kg
	2.5 tonne	chlorine and sulphur dioxide stored as liquefied gas in containers >100 kg
	100 kg	liquefied gas kept in or on premises
	100 kg	other poisonous gases
4.1	5 tonne	
4.2	1 tonne	
4.3	1 tonne	
5.1	25 tonne	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
	5 tonne	ammonium nitrate — elsewhere
	2.5 tonne	dry pool chlorine — if at a dedicated pool supply shop, in containers <30 kg
	1 tonne	dry pool chlorine — if at a dedicated pool supply shop, in containers >30 kg
	5 tonne	any other class 5.1
5.2	10 tonne	
6.1	0.5 tonne	packing group I
	2.5 tonne	packing groups II and III
6.2	0.5 tonne	includes clinical waste
7	all	should demonstrate compliance with Australian codes
8	5 tonne	packing group I
	25 tonne	packing group II
	50 tonne	packing group III

Figure 2-2: General Screening Threshold Quantities

Transportation screen thresholds have been provided in **Figure 2-3**.

Class	Vehicle Movements		Minimum quantity*	
	Cumulative	Peak	per load (tonne)	
	Annual	or Weekly	Bulk	Packages
1	see note	see note	see note	
2.1	>500	>30	2	5
2.3	>100	>6	1	2
3PGI	>500	>30	1	1
3PGII	>750	>45	3	10
3PGIII	>1000	>60	10	no limit
4.1	>200	>12	1	2
4.2	>100	>3	2	5
4.3	>200	>12	5	10
5	>500	>30	2	5
6.1	all	all	1	3
6.2	see note	see note	see note	
7	see note	see note	see note	
8	>500	>30	2	5
9	>1000	>60	no limit	

Figure 2-3: Transportation Screening Thresholds

3.0 Project Description

3.1 Site Location and Context

The sites are in the Georges River Local Government Area (LGA), within the Kogarah town centre.

The clinical tower site is adjoined to the south by an existing multi-storey health services facility, which forms part of the St George Private Hospital campus. South Street separates this facility from the main hospital campus, though a connecting sky-bridge provides pedestrian access between the buildings. Further west is the St George Public Hospital, and other surrounding development comprises a mix of commercial premises (typically at ground floor) and medium and high-density residential premises.

On the opposite (eastern) side of Princes Highway is a mix of educational premises including Moorfield Girls High School, James Cook Boys Technology High School, St George High School, and a TAFE NSW campus. Surrounding development on this side of Princes Highway primarily constitutes low density residential premises.

Kogarah Train Station is south-west of the site, approximately 500 m away. There is a pedestrian bridge that extends from Hogben Street over the Princes Highway, which provides direct access to the eastern side of the highway.

The sites are approximately 1.7 km from Brighton Le Sands Beach, and approximately 3.5 km from Sydney Airport. Refer to **Figure 3-1** for a site context map.

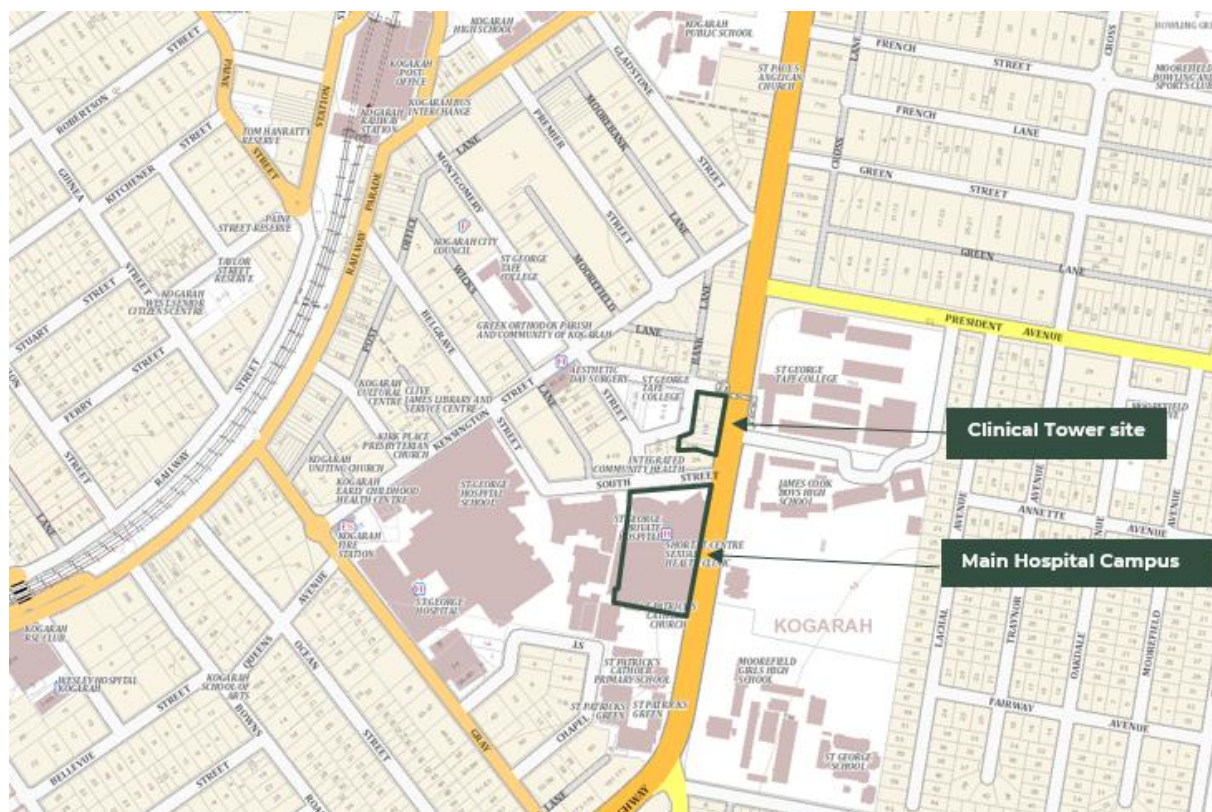


Figure 3-1: Site Context Map

Source: Six Maps

3.2 Site Description

3.2.1 Clinical Tower Site

The proposed new health services facility (hospital) will be located on land that is bound by three road frontages, being Princes Highway to the east (a classified road), Hogben Street to the north, and Bank Lane to the west. This site comprises eight adjoining allotments of land, known as 119 – 129 Princes Highway, Kogarah, and 2 Hogben Street, Kogarah.

The site currently accommodates a hard-stand parking lot, providing approximately 76 car parking spaces and a two-storey commercial premises (subject to separate demolition), which is attached to the existing multi-storey health services facility at 2 South Street, Kogarah.

Refer to **Figure 3-2** for a site aerial excerpt.



Figure 3-2: Site Aerial Extract

Source: Metro Map & Patch, modified by Patch

3.2.2 Main Hospital Campus

The existing hospital is located at 1 South Street, Kogarah which is also known as 1A South Street, Kogarah. This site is bound by two road frontages, being South Street to the north and Princes Highway (a classified road) to the east.

The site accommodates the St George Private Hospital's main campus, with vehicular access provided off South Street. Refer to **Figure 3-3** for a site aerial excerpt.



Figure 3-3: Main Hospital Site Aerial Extract

Source: Metro Map & Patch, modified by Patch

3.3 Overview of Proposed Development

The SSDA seeks approval for the expansion of the St George Private Hospital. Specifically, the SSDA seeks consent for two components: the first being the erection of a health services facility (hospital), and the second relating to upgrades to the main hospital campus, including a new emergency department.

In summary, approval for the following is sought for the clinical tower site:

- Site preparation works and bulk earthworks, including tree clearing.
- Construction of a seven (7) storey health services facility (hospital) equating to a total GFA of 9,942 m².
- Construction of a five (5) level basement carpark including a radiation oncology unit, providing a total of 241 parking spaces.
- Ancillary office, amenities, and loading dock provisions.
- Basement storage and a substation.
- Landscaping works.

The proposed development is depicted in the figure below, with full architectural details provided within the EIS.

In addition, approval for the following is sought for the main hospital campus:

- Construction of an emergency department at the northern end of the existing hospital, to be operated 24 hours a day, seven days a week.
- Alterations to the South Street frontage, to facilitate ambulance bays and access requirements.
- Associated internal re-configurations.

The proposed development is depicted in the figure below, with full architectural details provided within the EIS.

3.4 SEARs Relevant to this Report

This SEPP-RH report has been prepared to respond to the SEARs issued for the St George Private Hospital Expansion project. The SEARs that are relevant to this SEPP-RH assessment, and where they are addressed within this report, are detailed in **Table 3-1**.

Table 3-1: SEARs St Georges Private Hospital

Issue and Assessment Requirements	Documentation	Response
Hazards & Risks		
Where there are dangerous goods and hazardous materials associated with the development provide a preliminary risk screening in accordance with Chapter 3 of SEPP (Resilience and Hazards) 2021.	SEPP-RH	This report predominantly Sections 3 and 4.
Where required by SEPP (Resilience and Hazards) 2021, provide a Preliminary Hazard Analysis prepared in accordance with Hazardous Industry Planning Advisory Paper No.6 – Guidelines for Hazard Analysis and Multi-Level Risk Assessment.	n/a	SEPP-RH not exceeded
If the development is adjacent to or on land in a pipeline corridor, report on consultation outcomes with the operator of the pipeline and prepare a hazard analysis.	n/a	The proposed development is not in proximity to a high pressure pipeline corridor.

3.5 Quantities of Dangerous Goods

Whilst it is proposed to install a 3,000 L liquid oxygen tank, investigations indicate this may not be feasible. Subsequently, two options have been proposed based on whether the oxygen tank can be installed or not. These are presented in the following subsection with both options being screened in this report.

Figure 3-4 is the layout for Option A in the main site. Option B would be similar with the removal of the oxygen tank. **Figure 3-5** shows the layout of the medical gas store in the Clinical Tower Site.

3.5.1 Option A

Provided **Table 3-2** are the total quantities of gases to be stored in Option A.

Table 3-2: Quantities of DGs Stored & Handled in Option A

Class	Description	Vessel Volume	Quantity	Volume (L)	Mass (kg)
Main Site					
2.2(5.1)	Liquid oxygen	3,000 L	1	3,000	3,423^
2.2	Medical air	50 L	75	3,750	1,125
2.2	Medical gas (Carbon dioxide)	50 L	9	450	135
2.2	Medical gas (helium)	10 L	6	60	18
2.2(5.1)	Medical gas (Oxygen)	50 L	30	1,500	450
2.2(5.1)	Medical gas (Oxygen)	24 L	-	500	150
		3 L	-		
2.2(5.1)	Medical gas (Nitrous Oxide)	34 L	36	1,225	367.5
		3 L	3	9	
Clinical Tower Site					
2.2(5.1)	Medical gas (oxygen)	50	90	450	225

[^]1,141 kg/m³

*Mass of cylinders vary with pressure and gas type. Typical masses range from 4 kg – 15 kg per cylinder based on a data collected from site visits from hospitals / universities. Assumed mass of G-sized cylinders is 15 kg/cylinder. Smaller cylinder water capacities are based on linear mass from the 15 kg/cylinder assumption for a 50 L cylinder.

3.5.2 Option B

Provided **Table 3-3** are the total quantities of gases to be stored in Option B.

Table 3-3: Quantities of DGs Stored & Handled in Option B

Class	Description	Vessel Volume	Quantity	Volume (L)	Mass (kg)
Main Site					
2.2	Medical air	50 L	75	3,750	1,125
2.2	Medical gas (Carbon dioxide)	50 L	9	450	135
2.2	Medical gas (helium)	10 L	6	60	18
2.2(5.1)	Medical gas (Oxygen)	50 L	150	7,500	2,250
2.2(5.1)	Medical gas (Oxygen)	24 L	-	500	150
		3 L	-		
2.2(5.1)	Medical gas (Nitrous Oxide)	34 L	36	1,225	367.5
		3 L	3	9	
Clinical Tower Site					
2.2(5.1)	Medical gas (oxygen)	50	90	450	225

*Mass of cylinders vary with pressure and gas type. Typical masses range from 4 kg – 15 kg per cylinder based on a data collected from site visits from hospitals / universities. Assumed mass of G-sized cylinders is 15 kg/cylinder. Smaller cylinder water capacities are based on linear mass from the 15 kg/cylinder assumption for a 50 L cylinder.

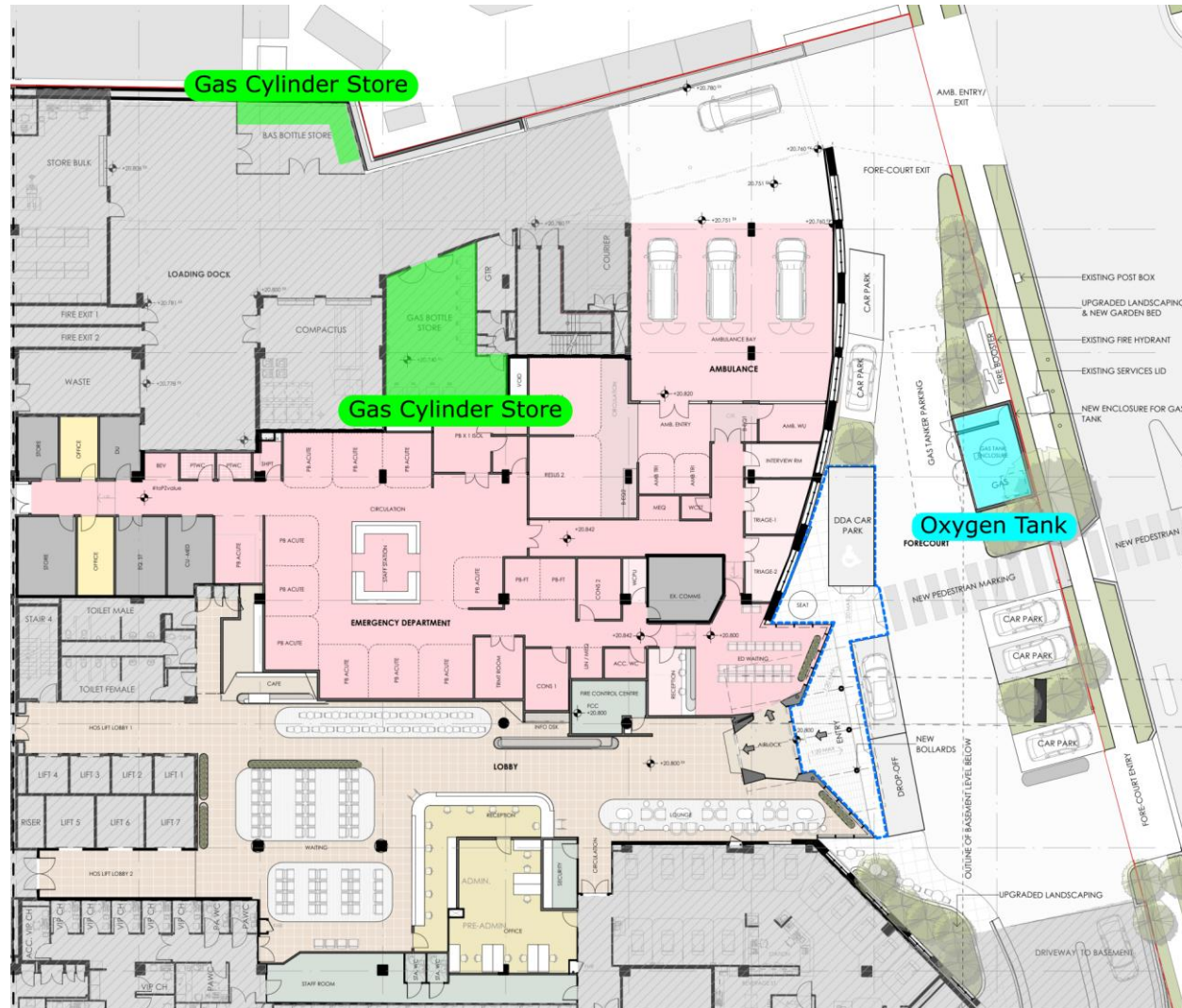


Figure 3-4: Site Layout (Option A)

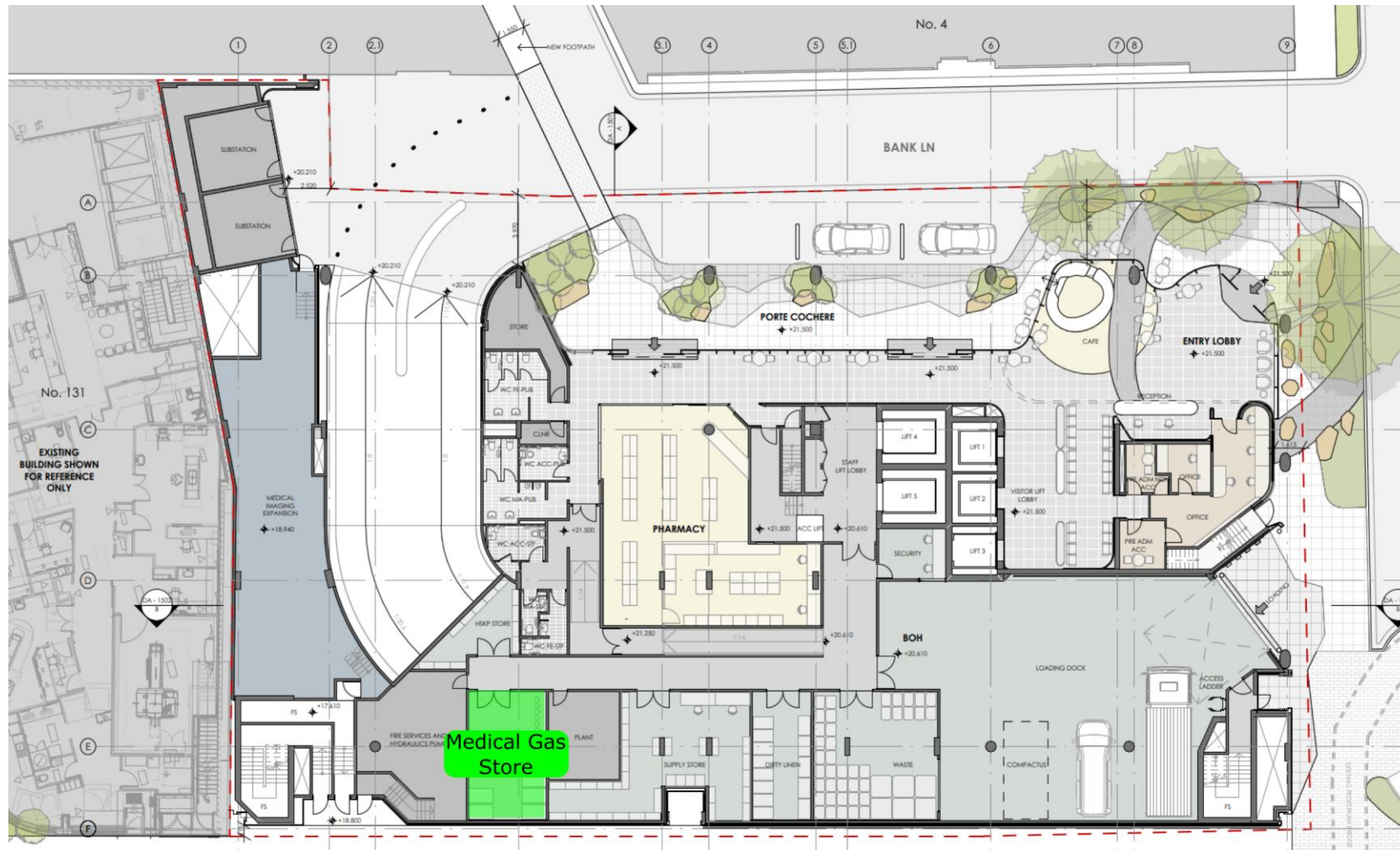


Figure 3-5: Site Layout (Clinical Tower Site)

4.0 SEPP Review

4.1 Proposed Storage Details

The maximum quantities of gases stored in the hospital for Option A and Option B are provided in **Table 4-1** and **Table 4-2**. Each table includes an assessment of whether the Class is subject to the SEPP.

Table 4-1: DG Classes or Materials Stored and Maximum Quantities for Option A

Class	Description	PG	Quantity (kg)	Class Subject to SEPP-RH (Y/N)
2.2	Non-Flammable, Non-toxic	-	5,688	N
5.1	Oxidising Agents	-	4,615	Y

Table 4-2: DG Classes or Materials Stored and Maximum Quantities for Option B

Class	Description	PG	Quantity (kg)	Class Subject to SEPP-RH (Y/N)
2.2	Non-Flammable, Non-toxic	-	4,045.5	N
5.1	Oxidising Agents	-	2,992.5	Y

4.2 Assessment of Hazards

4.2.1 Storage

An assessment of the DG storages against the applicable threshold quantities has been conducted in **Table 4-3** and **Table 4-4** for Options A and B respectively. The results of the assessment indicate that the thresholds are not exceeded for each option; hence, SEPP-RH does not apply.

Table 4-3: Quantities Stored and SEPP-RH Threshold for Option A

Description	Class	PG	Quantity (kg)	SEPP-RH Threshold (kg)	Does SEPP-RH Apply? (Y/N)
Oxidising Agents (Tank & Cylinders)	5.1	-	4,615	5,000	N

Table 4-4: Quantities Stored and SEPP-RH Threshold for Option B

Description	Class	PG	Quantity (kg)	SEPP-RH Threshold (kg)	Does SEPP-RH Apply? (Y/N)
Oxidising Agents (Cylinders)	5.1	-	2,992.5	5,000	N

4.2.2 Cumulative

It is anticipated that the existing portions of the hospital may also contain DGs; however, these are expected to be in minor quantities for use in the hospital and would thus be separated from the upgraded area and the risk profiles would be unlikely to impact with the proposed stores and thus would not result in an overlapping cumulative risk profile. Therefore, it is considered that based on the proposed upgrade, the cumulative risk profile in the precinct would not result in unacceptable risks to the surrounding land uses.

4.2.3 Transport

DGs will not be transported to the site on a regular basis to the hospital in quantities that would exceed the minimum load limit in **Figure 2-3**. The only installation proposed as part of this project that may result in a delivery that could exceed the minimum load limit would be the oxygen tank and this is not expected to occur at a frequency that would exceed the limits. Therefore, with respect to transport, the SEPP-RH thresholds are not expected to be exceeded; hence, SEPP-RH would not apply to the transport of DGs at the site.

4.3 Assessment of Offense

SEPP-RH also contains a requirement for review of operations that may cause offense in the form of odour, environmental impact, nuisance (noise), etc. An indication of whether “offensiveness” may occur at the facility determines if an Environmental Protection Authority (EPA) license is required for specific site operations (Ref. [3] and [4]).

A review of the facilities operations indicates that there are no processes that would result in the manufacture, production, or transfer of materials in a form that may release of bulk materials at the site or potentially result in odour generation or excessive noise. An EPA license would not be required for this site.

Further, there would be no unusual operations that would cause potential odours, or excessive noise to closest residential areas. Therefore, it is considered that noise generated from the site operations would not exceed the background noise already exposed at residential areas.

In summary, there is no potential for “offensive” operations at the site or noise that has been assessed as part of the estate DA and therefore Chapter 3 of the SEPP-RH does not apply in this case.

5.0 Conclusion and Recommendations

5.1 Conclusions

A review of the quantities of DGs stored at the proposed facility and the associated vehicle movements was conducted and compared to the threshold quantities outlined in Chapter 3 of SEPP (Resilience and Hazards). The results of this analysis indicates the threshold quantities for the DGs to be stored and transported are not exceeded; hence, the Chapter 3 of SEPP (Resilience and Hazards) does not apply to the project. Furthermore, a review of the potential to cause offense was conducted which indicated the site operations would be unlikely to result in noise or odour to occur at levels which would cause offense.

As the facility is not classified as potentially hazardous or offensive, it is not necessary to prepare a Preliminary Hazard Analysis for the facility as Chapter 3 of SEPP (Resilience and Hazards) does not apply.

5.2 Recommendations

Notwithstanding the findings of this assessment, the following recommendations have been made:

- The liquid oxygen tank shall be subject to assessment against AS 1894:2025 to confirm separation requirements, ventilation, impact protection, etc.
- The gas cylinder store(s) shall be subject to assessment against AS 4332:2004 to confirm separation requirements, ventilation, segregation, etc.

6.0 References

[1] Department of Planning, "Applying SEPP 33," Department of Planning, Sydney, 2011.