



State Environmental Planning Policy No. 33

Sydney Business Park

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Sydney Business Park Pty Ltd

Prepared by

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Quality Management

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Executive Summary

Introduction

Sydney Business Park Pty Ltd (SBP) has proposed to develop four (4) new warehouses within the business park. One of the warehouses will be leased to Australian Pharmaceutical Industries (API), one by TJX and two speculative warehouses. The API and TJX warehouses will house minor quantities of materials classified as DGs while the speculative warehouses are yet to be leased to tenants.

The two leased warehouses (API & TJX) are subject to the State Environmental Planning Policy No. 33 (SEPP 33) as they store DGs and to provide flexibility in leasing options for the speculative warehouses, it has been proposed to conduct a SEPP 33 assessment for each warehouse as part of the Development Application (DA).

Sydney Business Park (SBP) has engaged Riskcon Engineering Pty Ltd (Riskcon) to prepare the SEPP 33 assessment for the site(s).

Conclusions

A review of the quantities of DGs stored at the site and the associated vehicle movements was conducted and compared to the threshold quantities outlined in Applying SEPP 33. The results of this analysis indicates the threshold quantities for the DGs to be stored and transported are not exceeded; hence, SEPP 33 does not apply to the project.

As the facility is not classified as potentially hazardous, it is not necessary to prepare a Preliminary Hazard Analysis for the facility as SEPP 33 does not apply.

Recommendations

The following recommendations have been made generally for sites storing DGs:

- The DGs shall be stored in a manner which complies with the applicable storage standards (i.e. AS/NZS 3833:2007 or AS 1940-2017).
- The documentation required by the Work Health and Safety (WHS) Regulation 2017 shall be prepared to demonstrate the risks have been assessed and minimised So Far As Is Reasonably Practicable (SFARP) as required by the WHS Regulations.
- Where flammable gases or liquids are stored, a hazardous area classification in accordance with AS/NZS 60079.10.1:2009 shall be prepared to ensure that an ignition source does not enter a hazardous atmosphere as required by the WHS Regulations.

The flammable liquids at the API site shall be stored in the area delineated in following figure. Flammable liquids may not be stored within the following sections of the warehouse:

- Within 6 m of the northern wall
- Within 1 m of the eastern wall
- Within 3 m of the southern wall

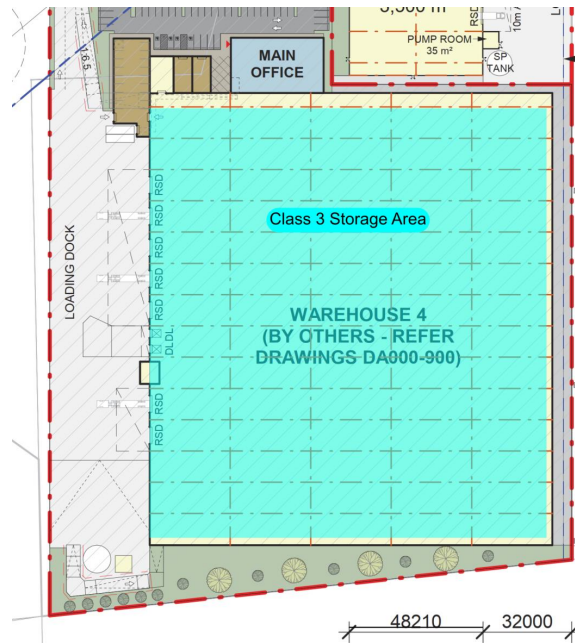


Table of Contents

Executive Summary	i
1.0 Introduction	1
1.1 Background	1
1.2 Scope of Work	1
2.0 Methodology	2
2.1 General Methodology	2
2.2 Data taken from "Applying SEPP 33"	2
3.0 SEPP 33 Review	5
3.1 Introduction	5
3.2 Warehouse 1 - TJX	5
3.2.1 Proposed Storage Details	5
3.2.2 Storage Assessment	5
3.2.3 Transport	6
3.3 Warehouse 2 - Speculative	6
3.3.1 Proposed Storage Details	6
3.3.2 Storage Assessment	7
3.3.3 Transport	8
3.4 Warehouse 3 - Speculative	8
3.4.1 Proposed Storage Details	8
3.4.2 Storage Assessment	8
3.4.3 Transport	8
3.5 Warehouse 4 - API	9
3.5.1 Proposed Storage Details	9
3.5.2 Storage Assessment	9
3.5.3 Transport	11
3.6 Cumulative Transport Assessment	11
4.0 Conclusion and Recommendations	12
4.1 Conclusions	12
4.2 Recommendations	12
5.0 References	13

List of Figures

Figure 2-1: Screening Method to be Used	2
Figure 2-2: General Screening Threshold Quantities	3
Figure 2-3: Transportation Screening Thresholds	4
Figure 3-1: Class 3 SEPP 33 Distance – Warehouse 1 (TJX)	6
Figure 3-2: Class 3 SEPP 33 Distance – Warehouse 2 (Speculative)	7
Figure 3-3: Class 3 SEPP 33 Distance - Warehouse 4 (API)	10

List of Tables

Table 3-1: DG Classes or Materials Stored and Maximum Quantities at Warehouse 1 (TJX)	5
Table 3-2: Quantities Stored and SEPP 33 Threshold for Warehouse 1 (TJX)	5
Table 3-3: DG Classes or Materials Stored and Maximum Quantities for Warehouse 2	6
Table 3-4: Quantities Stored and SEPP 33 Threshold for Warehouse 2 (Speculative)	7

Table 3-5: DG Classes or Materials Stored and Maximum Quantities for Warehouse 3	8
Table 3-6: Quantities Stored and SEPP 33 Threshold for Warehouse 3 (Speculative)	8
Table 3-7: DG Classes or Materials Stored and Maximum Quantities for Warehouse 4 (API)	9
Table 3-8: Quantities Stored and SEPP 33 Threshold for Warehouse 4 (API)	9

1.0 Introduction

1.1 Background

Sydney Business Park Pty Ltd (SBP) has proposed to develop four (4) new warehouses within the business park. One of the warehouses will be leased to Australian Pharmaceutical Industries (API), one by TJX and two speculative warehouses. The API and TJX warehouses will house minor quantities of materials classified as DGs while the speculative warehouses are yet to be leased to tenants.

The two leased warehouses (API & TJX) are subject to the State Environmental Planning Policy No. 33 (SEPP 33) as they store DGs and to provide flexibility in leasing options for the speculative warehouses, it has been proposed to conduct a SEPP 33 assessment for each warehouse as part of the Development Application (DA).

Sydney Business Park (SBP) has engaged Riskcon Engineering Pty Ltd (Riskcon) to prepare the SEPP 33 assessment for the site(s).

1.2 Scope of Work

The scope of work is to prepare a SEPP 33 assessment for warehouse 1, 2, 3 and 4 within the Sydney Business Park. Should any additional studies be required (i.e. PHA) these are not included within the scope of works. No other sites are included within the scope of works.

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

2.2 Data taken from “Applying SEPP 33”

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 for each class of DG and **Figure 2-2** indicates the SEPP 33 general screening thresholds (table 3 from the document).

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

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

Class	Vehicle Movements		Minimum quantity*	
	Cumulative Annual	Peak or Weekly	per load (tonne)	
			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 SEPP 33 Review

3.1 Introduction

State Environmental Planning Policy No. 33 – Hazardous and Offensive Developments (SEPP 33) has been developed under the Environmental 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 33 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 33 applies and a Preliminary Hazard Analysis (PHA) is required, followed by a series of hazard analysis studies stipulated by the Department of Planning, Industry, and Environment in the conditions of consent.

3.2 Warehouse 1 - TJX

3.2.1 Proposed Storage Details

TJX will store 40 pallets of flammable gases and liquids resulting in a total of 80 pallets. A typical pallet of retail products is approximately 500 kg; hence, this would result in a total storage of 20,000 kg of each class. Provided in **Table 3-1** is a summary of the DGs and materials proposed to be stored at the facility as part of the site operations.

Table 3-1: DG Classes or Materials Stored and Maximum Quantities at Warehouse 1 (TJX)

Class	Description	Maximum Quantity (kg)
2.1	Flammable gases (aerosols)	20,000 kg / 4,000*
3	Flammable liquids (i.e. hand sanitisers)	20,000

*Based upon 25% of the product weight being LPG

^Based upon ethanol density of 789 kg/m³

3.2.2 Storage Assessment

Threshold limits for the application of SEPP 33 are presented in **Table 3-2** indicating the maximum quantity that can be stored on site for each class.

Table 3-2: Quantities Stored and SEPP 33 Threshold for Warehouse 1 (TJX)

Class	Description	Maximum Quantity (kg)	SEPP 33 Threshold (kg)	Does SEPP 33 Apply?
2.1	Flammable gases (aerosols)	4,000	10,000	N
3	Flammable liquids	20,000	6.5 m (see Figure 3-1)	N

The flammable liquids threshold is based upon a distance to the site boundary based upon the quantity. The quantity of flammable liquid stored at the site is 20,000 kg which requires a distance of 6.5 m from the storage to the site boundary. The closest site boundary is 8.5 m from the

warehouse on the southern side of the warehouse which is greater than the threshold distance. Therefore, the flammable liquid storage would not exceed the SEPP 33 threshold distance.

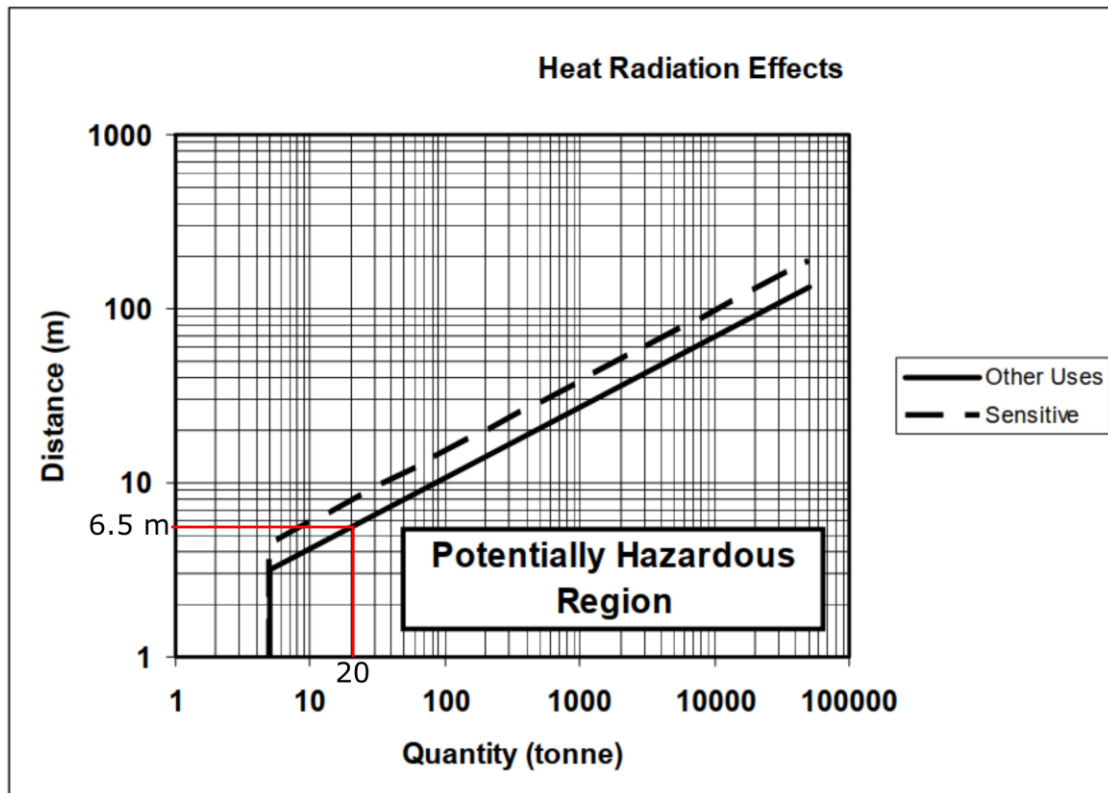


Figure 3-1: Class 3 SEPP 33 Distance – Warehouse 1 (TJX)

3.2.3 Transport

The quantities to be stored are less than SEPP 33 shown in **Figure 2-3** or not applicable; hence, a high turnover of stored product would be required to exceed the transport movements associated with the corresponding storage. This rate of turnover isn't credible; hence, it is considered that the transport screening thresholds of SEPP 33 would not be exceeded; hence, SEPP 33 would not apply.

3.3 Warehouse 2 - Speculative

3.3.1 Proposed Storage Details

Warehouse 2 has not been allocated to a tenant yet; hence, it would be a speculative development and so the storage commodities are unknown at this stage. Therefore, to provide some flexibility in terms of potential tenants, a SEPP 33 has been conducted to provide an allowance for storage of DG commodities as part of the initial Development Application (DA).

Provided in **Table 3-3** is a summary of the speculative quantities to be approved for Warehouse 2.

Table 3-3: DG Classes or Materials Stored and Maximum Quantities for Warehouse 2

Class	Description	Maximum Quantity (kg)
2.1	Flammable gases	30,000 kg / 7,500*
3	Flammable liquids	15,000

Class	Description	Maximum Quantity (kg)
8	Corrosive Substances	10,000

*Based upon 25% of the product weight being LPG

3.3.2 Storage Assessment

Threshold limits for the application of SEPP 33 are presented in **Table 3-4** indicating the maximum quantity that can be stored on site for each class.

Table 3-4: Quantities Stored and SEPP 33 Threshold for Warehouse 2 (Speculative)

Class	Description	Maximum Quantity (kg)	SEPP 33 Threshold (kg)	Does SEPP 33 Apply?
2.1	Flammable gases (aerosols)	7,500	10,000	N
3	Flammable liquids	15,000	5 m (see Figure 3-2)	N
8	Corrosive Substances	10,000	25,000	N

The flammable liquid threshold is based upon the separation distance from the storage to the site boundary. Based upon a storage of 15,000 kg, the separation required is 5 m as shown in **Figure 3-2**. The closest site boundary is 8.5 m; hence, the separation distance threshold is not exceeded.

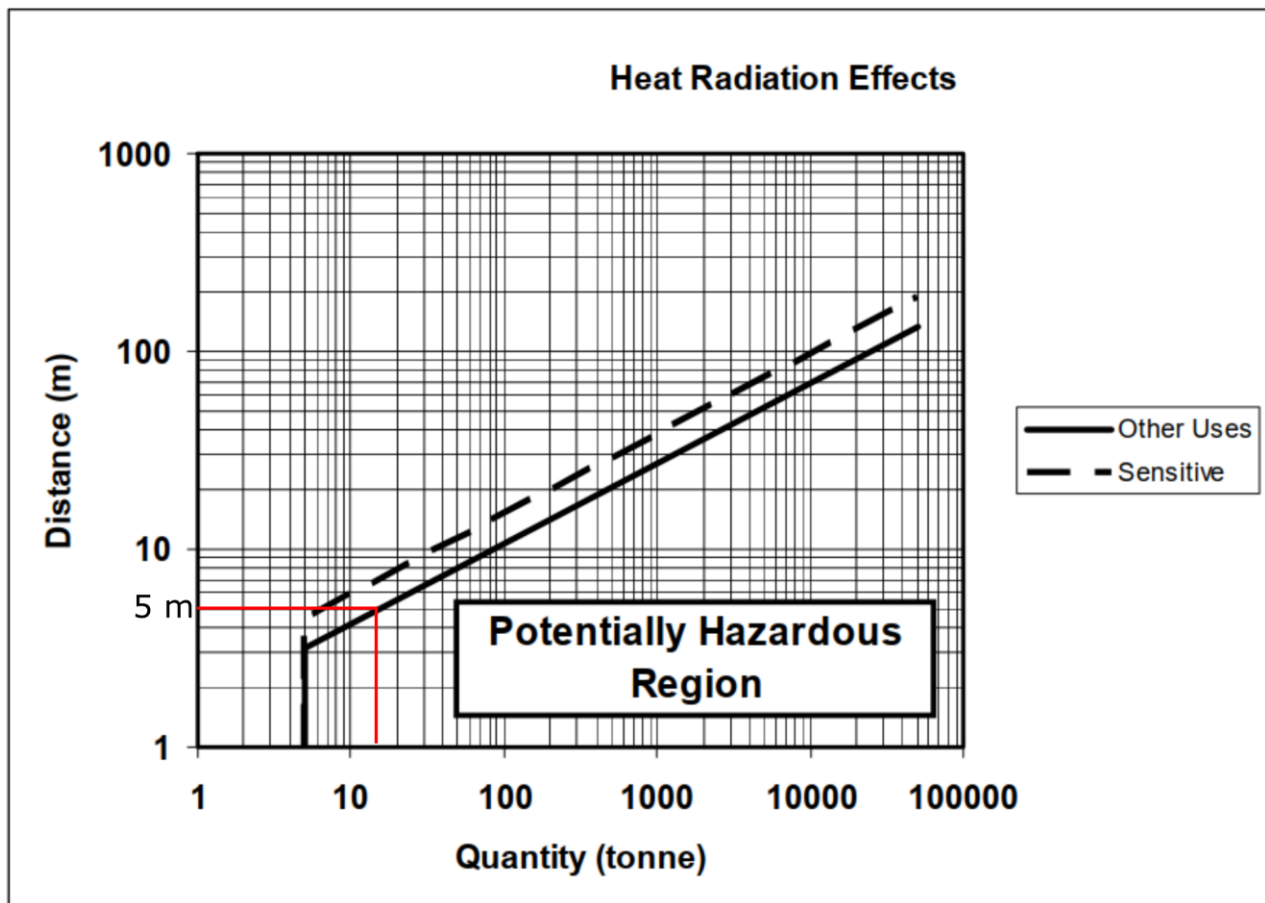


Figure 3-2: Class 3 SEPP 33 Distance – Warehouse 2 (Speculative)

3.3.3 Transport

The quantities to be stored are less than SEPP 33 shown in **Figure 2-3** or not applicable; hence, a high turnover of stored product would be required to exceed the transport movements associated with the corresponding storage. This rate of turnover isn't credible; hence, it is considered that the transport screening thresholds of SEPP 33 would not be exceeded; hence, SEPP 33 would not apply.

3.4 Warehouse 3 - Speculative

3.4.1 Proposed Storage Details

Warehouse 3 has not been allocated to a tenant yet; hence, it would be a speculative development and so the storage commodities are unknown at this stage. Therefore, to provide some flexibility in terms of potential tenants, a SEPP 33 has been conducted to provide an allowance for storage of DG commodities as part of the initial DA.

Provided in **Table 3-5** is a summary of the speculative quantities to be approved for Warehouse 3.

Table 3-5: DG Classes or Materials Stored and Maximum Quantities for Warehouse 3

Class	Description	Maximum Quantity (kg)
2.1	Flammable gases	16,000 kg / 4,000*
3	Flammable liquids	4,500
8	Corrosive Substances	5,000

*Based upon 25% of the product weight being LPG

3.4.2 Storage Assessment

Threshold limits for the application of SEPP 33 are presented in **Table 3-6** indicating the maximum quantity that can be stored on site for each class.

Table 3-6: Quantities Stored and SEPP 33 Threshold for Warehouse 3 (Speculative)

Class	Description	Maximum Quantity (kg)	SEPP 33 Threshold (kg)	Does SEPP 33 Apply?
2.1	Flammable gases (aerosols)	4,000	10,000	N
3	Flammable liquids	4,500	5,000*	N
8	Corrosive Substances	5,000	25,000	N

*Limit before assessment becomes distance based

3.4.3 Transport

The quantities to be stored are less than SEPP 33 shown in **Figure 2-3** or not applicable; hence, a high turnover of stored product would be required to exceed the transport movements associated with the corresponding storage. This rate of turnover isn't credible; hence, it is considered that the transport screening thresholds of SEPP 33 would not be exceeded; hence, SEPP 33 would not apply.

3.5 Warehouse 4 - API

3.5.1 Proposed Storage Details

Provided in **Table 3-7** is a summary of the DGs and materials proposed to be stored at the API facility as part of the site operations.

Table 3-7: DG Classes or Materials Stored and Maximum Quantities for Warehouse 4 (API)

Class	Description	Maximum Quantity (kg)
2.1	Flammable gases (aerosols)	38,000 kg / 9,500*
2.2	Non-flammable, non-toxic gases	700
3	Flammable liquids (i.e. hand sanitisers)	76,000 L / 60,000^
4.1	Flammable solids (i.e. ethanol wipes)	2,000
5.1	Oxidising substances	3500
6.1	Toxic substances	100
8	Corrosive substances	1,000
9	Miscellaneous DGs	5,000

*Based upon 25% of the product weight being LPG

^Based upon ethanol density of 789 kg/m³

3.5.2 Storage Assessment

Threshold limits for the application of SEPP 33 are presented in **Table 3-8** indicating the maximum quantity that can be stored on site for each class.

Table 3-8: Quantities Stored and SEPP 33 Threshold for Warehouse 4 (API)

Class	Description	Maximum Quantity (kg)	SEPP 33 Threshold (kg)	Does SEPP 33 Apply?
2.1	Flammable gases (aerosols)	9,500	10,000	N
2.2	Non-flammable, non-toxic gases	700	n/a	N
3	Flammable liquids (i.e. hand sanitisers)	60,000	8.5 m (see Figure 3-3)	N
4.1	Flammable solids (i.e. ethanol wipes)	2,000	5,000	N
5.1	Oxidising substances	3,500	5,000	N
6.1	Toxic substances	100	2,500	N
8	Corrosive substances	1,000	25,000	N
9	Miscellaneous DGs	5,000	n/a	N

The flammable liquids are based upon a distance to the site boundary based upon the quantity. The quantity of flammable liquid stored at the site is 60 tonnes which requires a distance of 8.5 m from the storage to the site boundary.

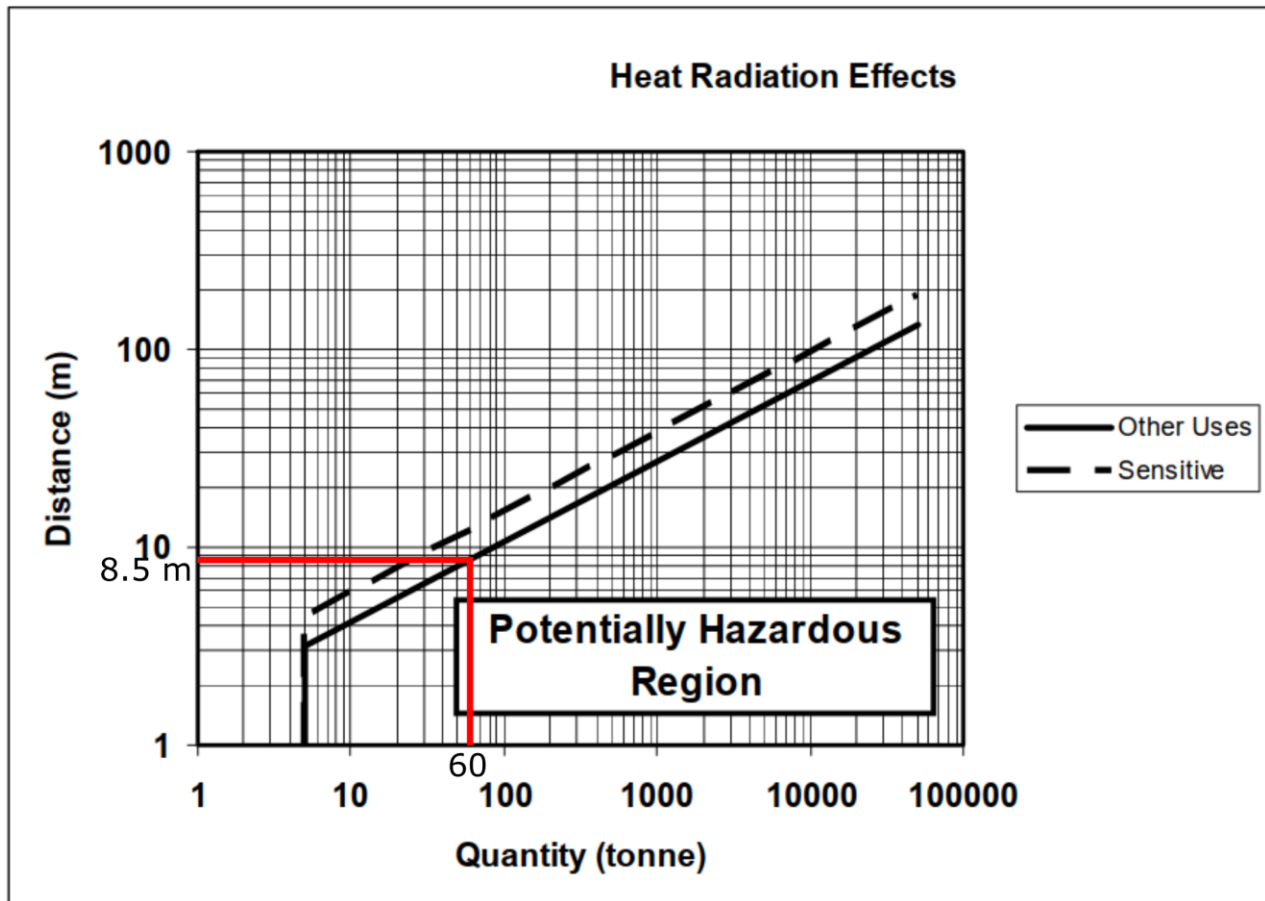


Figure 3-3: Class 3 SEPP 33 Distance - Warehouse 4 (API)

A review of the site boundary indicates that the closest boundary is 3 m on the northern side, 8 m on the eastern boundary and 6 m on the southern boundary in the worst location. Therefore, to remain below SEPP 33, the flammable liquids would need to be stored >9 m from the site boundaries, subsequently, the following recommendation has been made:

The flammable liquids shall be stored in the area delineated in **Figure 3-4**. Flammable liquids may not be stored within the following sections of the warehouse:

- Within 6 m of the northern wall
- Within 1 m of the eastern wall
- Within 3 m of the southern wall

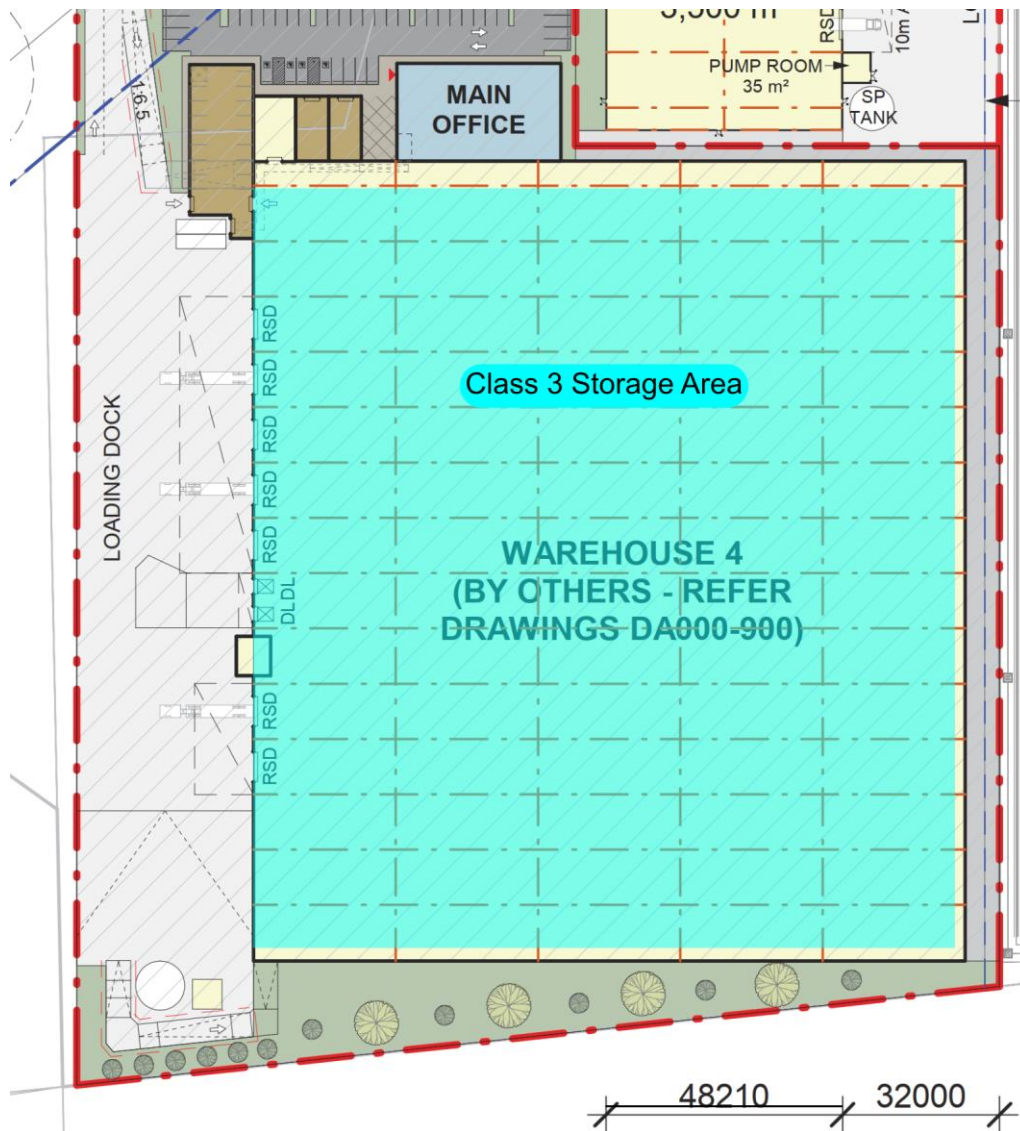


Figure 3-4: Class 3 Storage Area

3.5.3 Transport

The quantities to be stored are less than SEPP 33 shown in **Figure 2-3** or not applicable; hence, a high turnover of stored product would be required to exceed the transport movements associated with the corresponding storage. This rate of turnover isn't credible; hence, it is considered that the transport screening thresholds of SEPP 33 would not be exceeded; hence, SEPP 33 would not apply.

3.6 Cumulative Transport Assessment

A review of the three sites indicates that even if the sites were all operating with the expected limits of DG storage proposed for each site the potential to exceed the transport movements of DGs would require a substantial turnover over product which is not considered credible. Therefore, the cumulative assessment of all sites operating would not be considered to exceed the transport thresholds.

5.0 References

- [1] Department of Planning, "Applying SEPP 33," Department of Planning, Sydney, 2011.
- [2] National Transport Commission (NTC), "Australian Code for the Transport of Dangerous Goods by Road & Rail, 7th Edition," 2011.