



Core Engineering Group • Fire • Risk • Emergency Management

28th of September, 2016
Level 4, Grafton Bond
201 Kent Street
Sydney NSW 2000
Ph: (02) 9299 6605

Our Reference: R200429

Mr. Paul Solomon
Frasers Property
Level 3, 1C Homebush bay Drive,
Rhodes NSW 2138

Dear Paul,

Regarding: SEPP33 Application for the Lot 3 Warehouse and Industrial Facility, Horsley Park, NSW

Thank you for your query regarding the application of SEPP33 to the two speculative warehouses located at Lot 3 Warehouse and Industrial Facility, Horsley Park, NSW.

Attached is a completed SEPP33 assessment of the two warehouses located at Lot 3 Warehouse and Industrial Facility, Horsley Park based on maximum allowable quantities of Dangerous Goods to be stored as part of the operations. The results of the analysis indicate the maximum quantities stored, and the location of the storage, do not result in the facility being classified as a potentially hazardous development; hence, SEPP33 does not apply to the proposed facility and no additional planning risk studies are required for the development. The transport of DGs does not result in excessive risk; hence, no further incident assessment would be required as this is covered by the Australian Dangerous Goods Code.

Should you have any questions regarding the attached, please contact either myself (0438 749 181) or Steve (0411 659 309).

Yours faithfully,

CORE - Risk Engineering Solutions

Renton Parker
Risk Engineer
BEng (Chem. Hons)
MIEAust CPEng NER, VPAIDGC

Sydney
Suite 401, Grafton Bond Building,
201 Kent Street, Sydney NSW 2000
Phone | +61 2 9299 6605
Fax | +61 2 9299 6615
Email | sydney@coreengineering.com.au

Steve Sylvester
Associate Director
BEng., MAIDGC,
FS Engineer (TÜV 2203/10),
EEHA CT04598a&b, CR16285, M15217037007
Melbourne
Suite 107, Level 1
480 Collins Street, Melbourne VIC 3000
Phone | +61 3 8548 1818
Email | melbourne@coreengineering.com.au

1. INTRODUCTION

1.1. Background & Objectives

Fraser's Group is currently developing a warehouse and industrial facility on Horsley Drive, Horsley Park, NSW, with the use currently unknown as no specific businesses have signed agreements to occupy the facility(s). The property comprises two warehouse/industrial areas, where either could be used for the general warehouse storage/industrial use, storing a number of Dangerous Goods. As either warehouse storage/industrial area may store a number of Dangerous Goods and Hazardous Materials, the facility may be subject to SEPP33, based on the proposed quantity of DGs stored.

The aim of the study is to determine whether SEPP33 applies to the proposed warehouse storage and to determine the development requirements based on the study outcome.

Fraser's Property has commissioned Core Engineering (CORE) to conduct the SEPP33 assessment for the facility. This document represents CORE's assessment of SEPP33 to the proposed facility.

1.2. Scope of Work

The scope of work is for a SEPP33 assessment of the proposed quantities of Dangerous Goods (DGs) proposed for storage in nominated locations within the facility(s) at Horsley Park, to determine whether the SEPP33 policy applies to the facility(s). In addition, a review of the quantity of vehicle movements as a result of the DGs being stored will be assessed to determine whether additional traffic assessment is required. The assessment does not include any other sites or the preparation of any other planning studies should they be required.

2. 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 SEPP33 – Hazardous and Offensive Development” (Ref. [1]) to identify whether the storage location or quantity triggers SEPP33;
- Review the likely vehicular movements as a result of DGs being stored and compared against the applicable thresholds detailed in Applying SEPP33 (Ref. [1]); and
- Report on the findings of the SEPP33 assessment.

3. SEPP33 REVIEW

3.1 Data taken from “Applying SEPP33”

Figure 3-1, extracted from “Applying SEPP33” provides details on the application of Figures or Tables from the same document to determine the applied screening Threshold. It shows that:

- for LPG, Table 3 shall be used;
- for Class 3 PG II and III, Figure 9 shall be used (note: Class 3 PHI materials will not be stored at the facility);
- for Class 4, Class 5, Class 6, and Class 8, Table 3 shall be used;
- Class 9 is not subject to SEPP33; and
- For transport, Table 2.

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 3-1: Screening Method to be Used

Figure 9 and Table 3 from “Applying SEPP33” have been extracted and are shown in **Figure 3-2**, and **Figure 3-3** respectively.

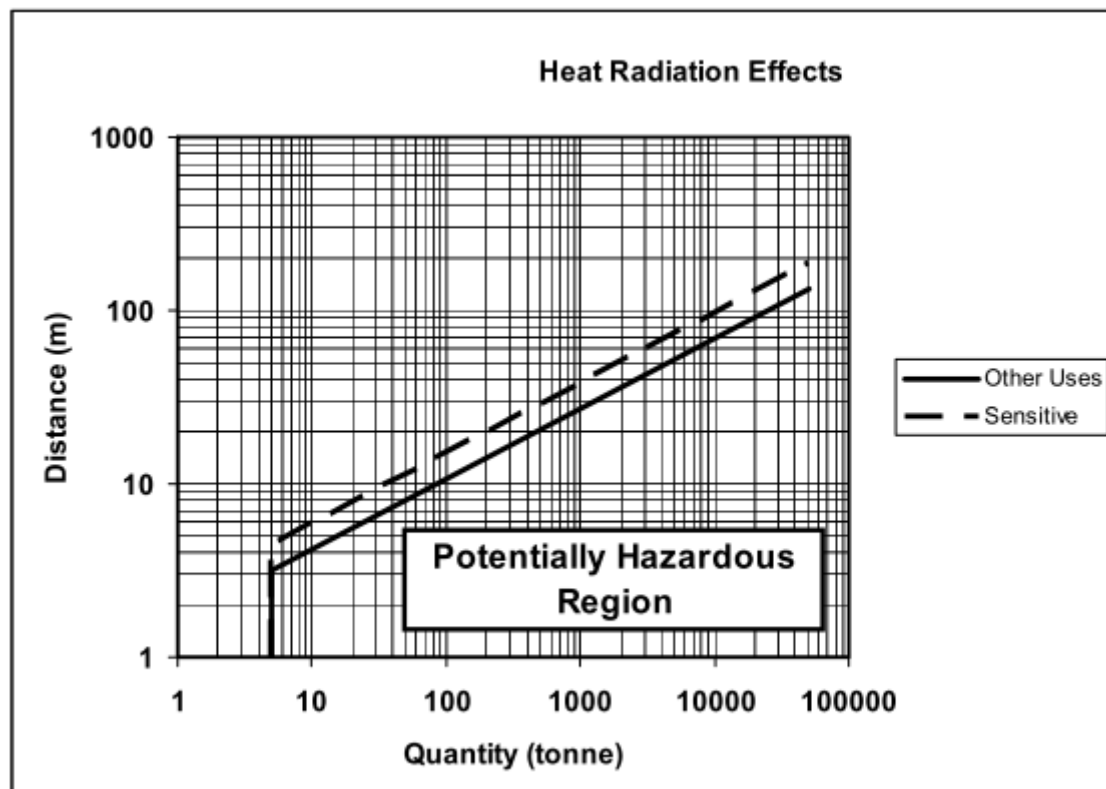


Figure 3-2: Class 3 PGII and PGIII Flammable Liquids

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)	
	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
Note: The classes used are those referred to in the Australian Dangerous Goods Code and are explained in Appendix 7.		

Figure 3-3: General Screening Threshold Quantities

Product will be transported to and from the warehouses; hence, it is necessary to review the implications the transport of DGs will have on the surrounding arterial roads. Table 2 from “Applying SEPP33” has been extracted and is shown in **Figure 3-4**.

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 3-4: SEPP33 Transport Thresholds

*If quantities are below this level, the potential risk is unlikely to be significant unless the number of traffic movements is high.

3.2 Proposed Storage Details – Speculative Warehouse #1

The maximum quantities of differing classes of DGs that are to be stored in the Speculative Warehouse #1, are shown in **Table 3-1**. An indicative storage configuration of the DGs is shown in **Figure 3-5**. The closest property boundary from the main warehouse structure is 8 m to the property to the East. However, when viewed as two tenancies within the warehouse, the closest site is immediately adjacent (to the south). Therefore, the location of DG storage within the warehouse will be located to maximise distance between the warehouses while complying with the separation to the boundary.

Table 3-1: DG Classes and Maximum Quantities Stored – Speculative Warehouse #1

CLASS	DESCRIPTION	PG	QUANTITY
2.1	Aerosols	-	< 6,000 kg (LPG)
	Cylinders	-	< 1,000 kg (LPG)
3	Flammable Liquids	II & III	< 40,000 kg
4.1	Flammable Solids	II & III	< 3,000 kg
5.1	Oxidising Substances	II & III	< 3,500 kg

CLASS	DESCRIPTION	PG	QUANTITY
6.1	Toxic Substances	II & III	< 2,000 kg
8	Corrosives	II & III	< 20,000 kg
9	Miscellaneous	III	< 20,000 kg

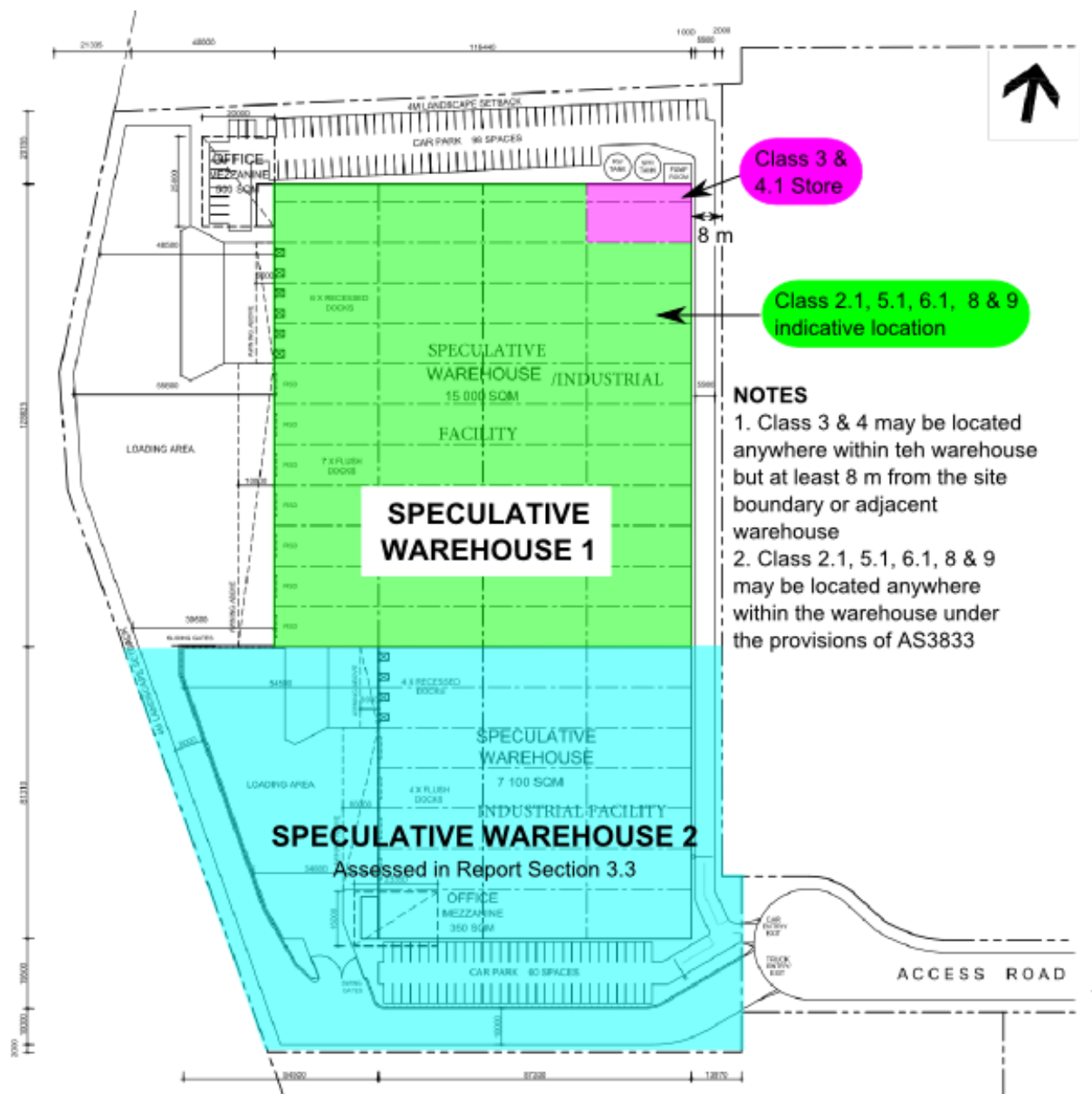


Figure 3-5: DG Locations – Speculative Warehouse 1

3.2.1 Classification of Stored Products

The ADG provides a list of materials which are classified as DGs under the requirements of the code. The goods to be stored at the Speculative Warehouse #1 are classified as DGs by the ADG; hence, it is subject to the assessment requirements of SEPP 33.

3.2.2 Application of State Environmental Planning Policy No.33 – Hazardous and Offensive Developments

State Environmental Planning Policy No.33 – Hazardous and Offensive Developments (SEPP33) 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 SEPP33 applies to a specific development. The guideline, “Applying SEPP33 - 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, SEPP33 applies and a Preliminary Hazard Analysis (PHA) is required, followed by a series of hazard analysis studies stipulated by the Department of Planning and Environment in the conditions of consent.

Threshold limits for the application of SEPP 33 are presented in **Table 3-2** along with maximum DG quantities that will be stored at the Horsley Park facility. The Table shows that threshold quantities are not exceeded within the Speculative Warehouse #1; hence, SEPP 33 does not apply, as all DGs are under the screening threshold.

Table 3-2: Quantities Stored and SEPP33 Threshold – Speculative Warehouse #1

CLASS	DESCRIPTION	PG	QUANTITY STORED	SEPP33 THRESHOLD	DOES SEPP33 APPLY?
2.1	Aerosols	-	< 6,000 kg (LPG)	10,000 kg	No
	Cylinders	-	< 1,000 kg (LPG)		
3	Flammable Liquids	II & III	< 40,000 kg	50,000 kg	No (See Figure 3-7)
4.1	Flammable Solids	II & III	< 3,000 kg	5,000 kg	No
5.1	Oxidising Substances	II & III	< 3,500 kg	5,000 kg	No
6.1	Toxic Substances	II & III	< 2,000 kg	2,500 kg	No
8	Corrosives	II & III	< 20,000 kg	25,000 kg	No
9	Miscellaneous	III	< 20,000 kg	Not applicable to SEPP33	No

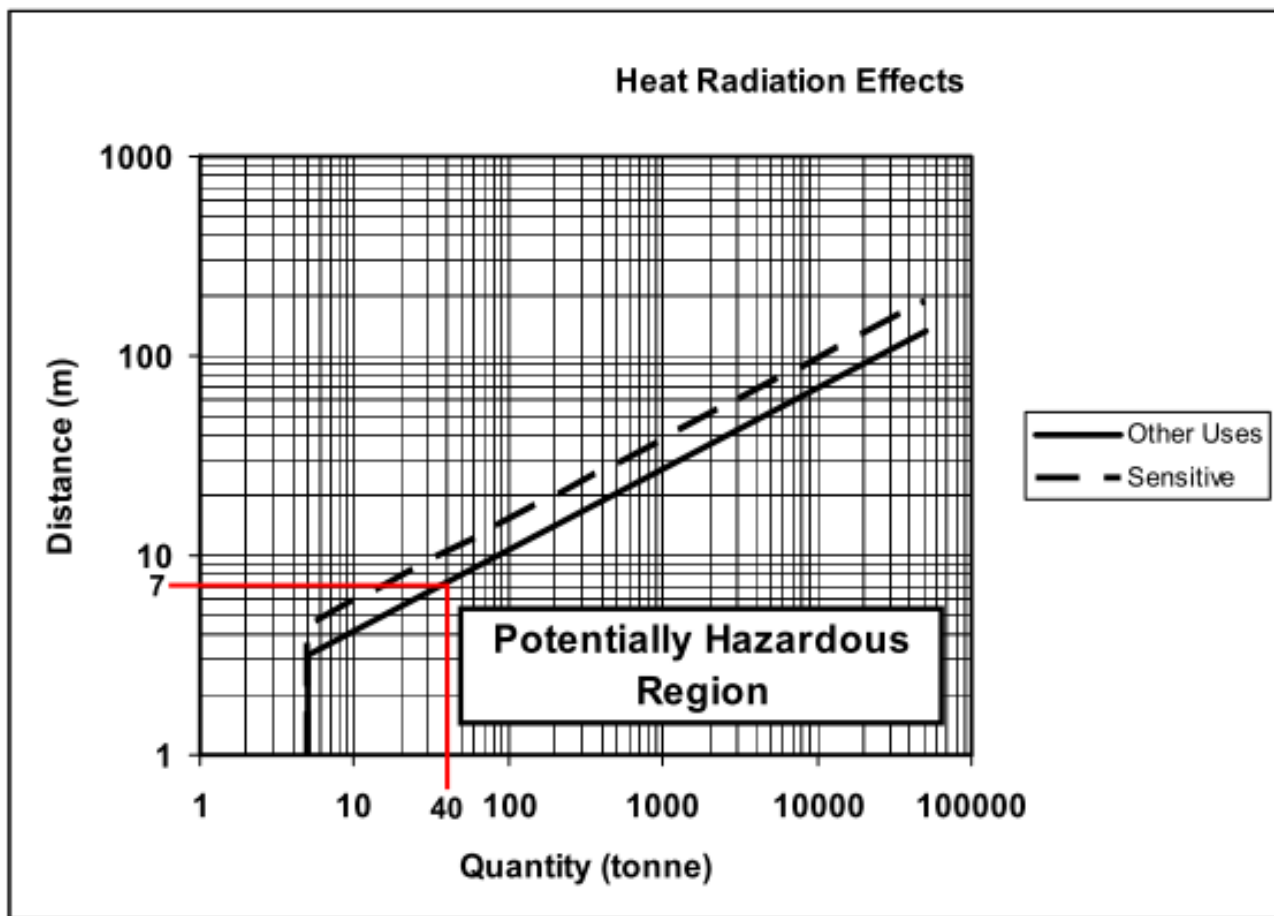


Figure 3-6: Class 3 PGII and PGIII Flammable Liquids Storage (Speculative Warehouse 1)

3.2.3 Transport

It is necessary to assess the impact of transporting DGs on the surrounding arterial roads to and from the facility. As the quantities to be stored are below SEPP 33, it can be assumed that the frequency of movements would be low. Therefore, it is considered prudent to review the transport SEPP 33 criteria on the basis of minimum transport load. **Table 3-3** has been developed based on the minimum load of goods to compare the maximum storage quantity within the warehouse to conceptualise whether the loads would be likely to be exceeded based on the maximum storage quantities.

Table 3-3: SEPP33 Transport Quantity vs Warehouse Storage Limits – Speculative Warehouse #1

CLASS	MINIMUM LOAD QUANTITY (T)	MAXIMUM STORAGE WITHIN WAREHOUSE (T)
2.1	5	7
3 (II)	10	40
3 (III)	No limit	
4.1	2	3
5.1	5	3.5
6.1	3	2
8	5	20

9	No limit	20
---	----------	----

Based on the maximum quantity to be stored in the warehouse and the SEPP33 load limits the quantities are unlikely to be exceeded as that would indicate very high turnover of product which would be unlikely to be achieved considering that vehicle movements will be predominantly small courier vehicles collecting smaller parcels for delivery in the greater NSW area.

Therefore, it is considered that the SEPP33 limits for transport would not be exceeded; hence, additional traffic management plans would not be required. It is noted, that the transport of DGs is covered by the Australian Dangerous Goods Code (ADG, Ref. [2]). Therefore, incident response will be covered by the transport of DGs via the ADG as appropriate with the loads being carried.

3.3 Proposed Storage Details – Speculative Warehouse #2

The maximum quantities of differing classes of DGs that are to be stored in the Speculative Warehouse #2, are shown in **Table 3-4**. An indicative storage configuration of the DGs is shown in **Figure 3-7**. The closest property boundary from the main warehouse structure is 8 m to the property to the East. However, when viewed as two tenancies within the warehouse, the closest site is immediately adjacent (to the south). Therefore, the location of DG storage within the warehouse will be located to maximise distance between the warehouses while complying with the separation to the boundary.

Table 3-4: DG Classes and Maximum Quantities Stored – Speculative Warehouse #2

CLASS	DESCRIPTION	PG	QUANTITY
2.1	Aerosols	-	< 7,000 kg (LPG)
	Cylinders	-	< 1,000 kg (LPG)
3	Flammable Liquids	II & III	< 30,000 kg
4.1	Flammable Solids	II & III	< 4,000 kg
5.1	Oxidising Substances	II & III	< 4,000 kg
6.1	Toxic Substances	II & III	< 2,000 kg
8	Corrosives	II & III	< 15,000 kg
9	Miscellaneous	III	< 10,000 kg

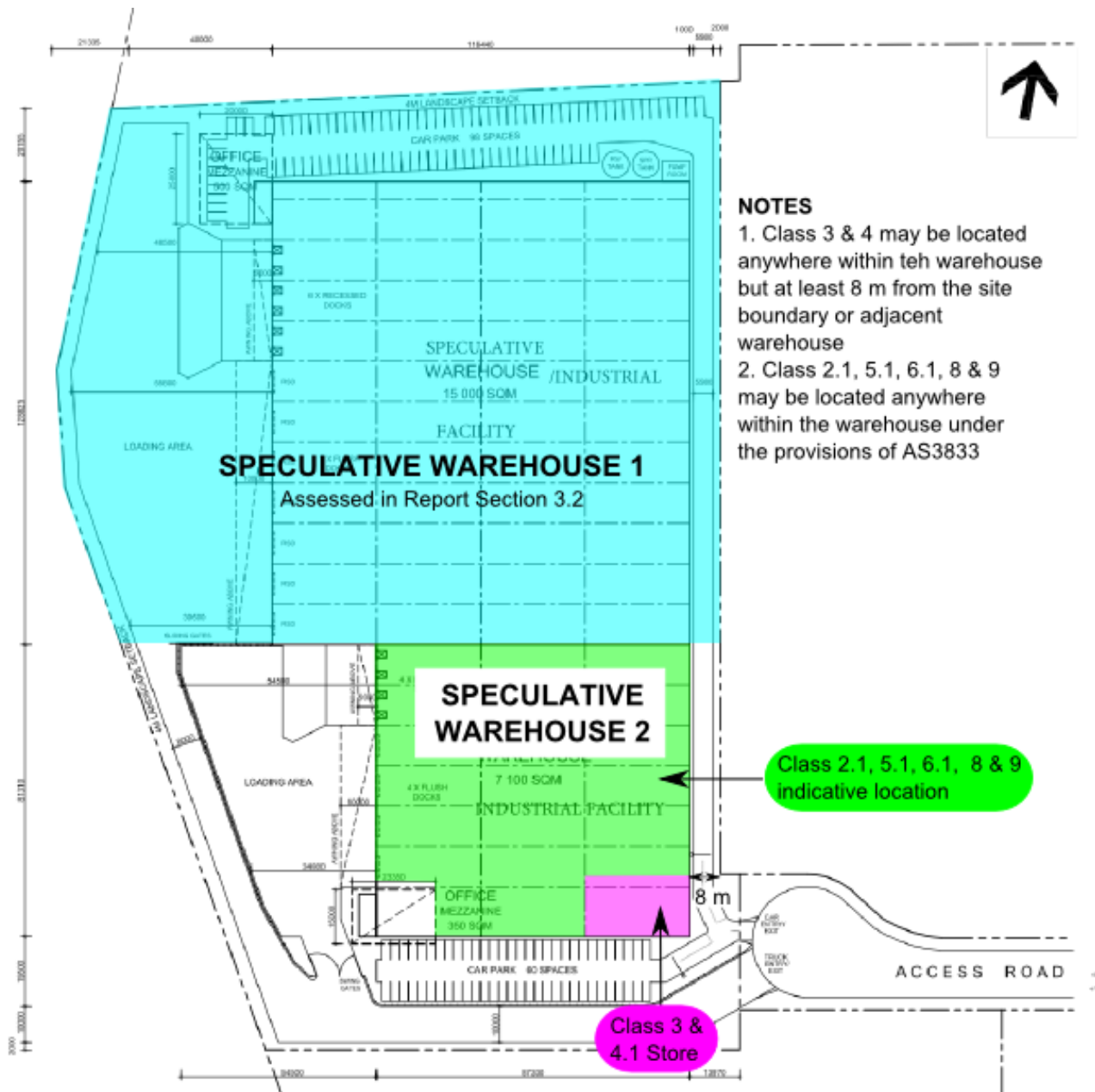


Figure 3-7: DG Locations – Speculative Warehouse 2

3.3.1 Classification of Stored Products

The ADG provides a list of materials which are classified as DGs under the requirements of the code. The goods to be stored at the Speculative Warehouse #2 are classified as DGs by the ADG; hence, it is subject to the assessment requirements of SEPP 33.

3.3.2 Application of State Environmental Planning Policy No.33 – Hazardous and Offensive Developments

State Environmental Planning Policy No.33 – Hazardous and Offensive Developments (SEPP33) 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 SEPP33 applies to a specific development. The guideline, "Applying SEPP33 - 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, SEPP33 applies and a Preliminary Hazard Analysis (PHA) is required, followed by a series of hazard analysis studies stipulated by the Department of Planning and Environment in the conditions of consent.

Threshold limits for the application of SEPP 33 are presented in **Table 3-5** along with maximum DG quantities that will be stored at the Horsley Park facility. The Table shows that threshold quantities are not exceeded at the Speculative Warehouse #2; hence, SEPP 33 does not apply, as all DGs are under the screening threshold.

Table 3-5: Quantities Stored and SEPP33 Threshold – Speculative Warehouse #2

CLASS	DESCRIPTION	PG	QUANTITY STORED	SEPP33 THRESHOLD	DOES SEPP33 APPLY?
2.1	Aerosols	-	< 7,000 kg (LPG)	10,000 kg	No
	Cylinders	-	< 1,000 kg (LPG)		
3	Flammable Liquids	II & III	< 30,000 kg	50,000 kg	No (See Figure 3-8)
4.1	Flammable Solids	II & III	< 4,000 kg	5,000 kg	No
5.1	Oxidising Substances	II & III	< 4,000 kg	5,000 kg	No
6.1	Toxic Substances	II & III	< 2,000 kg	2,500 kg	No
8	Corrosives	II & III	< 15,000 kg	25,000 kg	No
9	Miscellaneous	III	< 10,000 kg	Not applicable to SEPP33	No

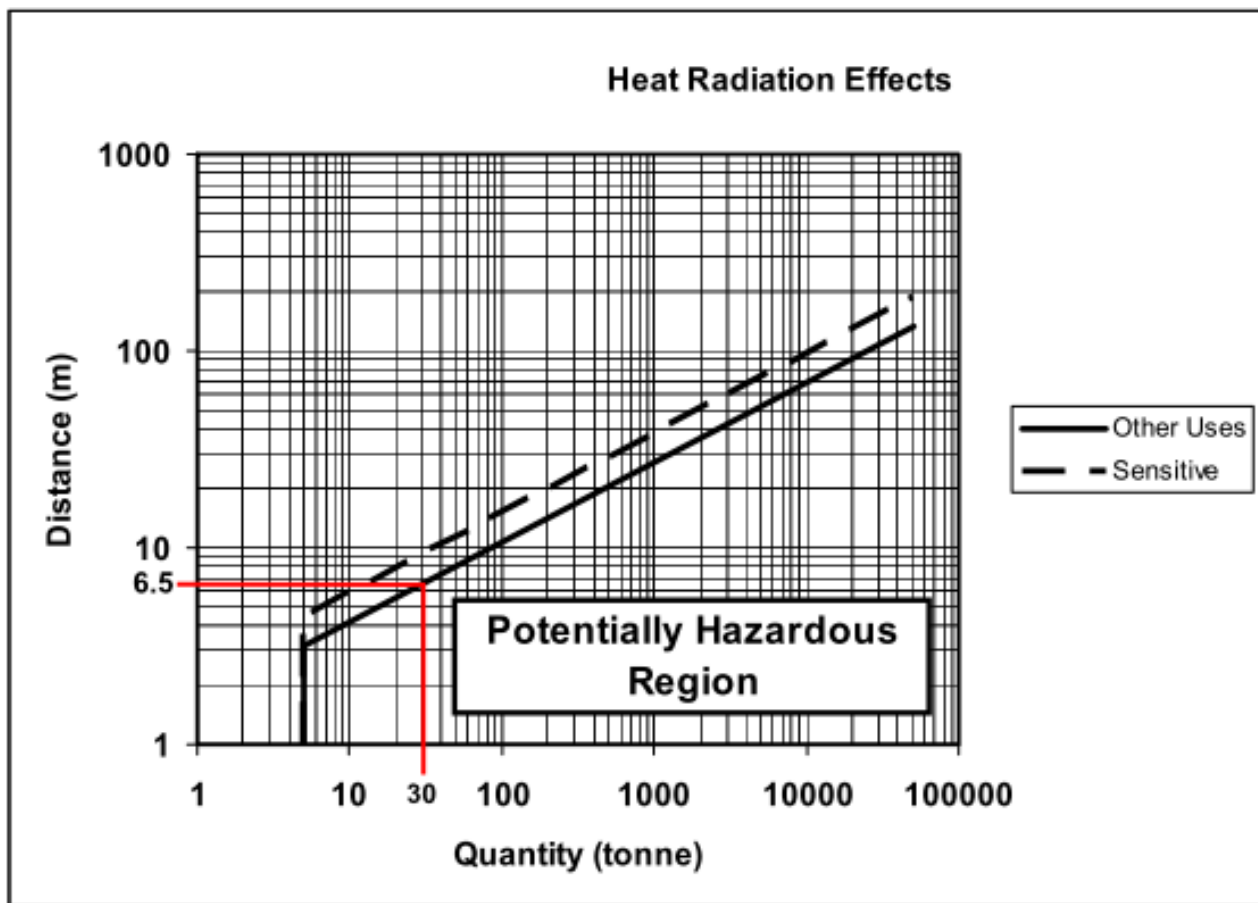


Figure 3-8: Class 3 PGII and PGIII Flammable Liquids Storage (Speculative Warehouse 2)

3.3.3 Transport

It is necessary to assess the impact of transporting DGs on the surrounding arterial roads to and from the facility. As the quantities to be stored are below SEPP 33, it can be assumed that the frequency of movements would be low. Therefore, it is considered prudent to review the transport SEPP 33 criteria on the basis of minimum transport load. **Table 3-6** has been developed based on the minimum load of goods to compare the maximum storage quantity within the warehouse to conceptualise whether the loads would be likely to exceed based on the maximum storage quantities

Table 3-6: SEPP33 Transport Quantity vs Warehouse Storage Limits – Speculative Warehouse #2

CLASS	MINIMUM LOAD QUANTITY (T)	MAXIMUM STORAGE WITHIN WAREHOUSE (T)
2.1	5	8
3 (II)	10	30
3 (III)	No limit	
4.1	2	4
5.1	5	4
6.1	3	2

8	5	15
9	No limit	10

Based on the maximum quantity to be stored in the warehouse and the SEPP33 load limits the quantities are unlikely to be exceeded as that would indicate very high turnover of product which would be unlikely to be achieved considering that vehicle movements will be predominantly small courier vehicles collecting smaller parcels for delivery in the greater NSW area.

Therefore, it is considered that the SEPP33 limits for transport would not be exceeded; hence, additional traffic management plans would not be required. It is noted, that the transport of DGs is covered by the Australian Dangerous Goods Code (ADG, Ref. [2]). Therefore, incident response will be covered by the transport of DGs via the ADG as appropriate with the loads being carried.

5. CONCLUSION

A review of the quantities of DGs stored at the proposed Fraser's Group Warehouse/industrial development was conducted and compared to the threshold quantities outlined in Applying SEPP33. The results of this analysis indicates that the threshold quantities for the DGs to be stored in both Speculative Warehouse #1 and #2 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 PHA study to fully assess the potentially hazardous nature of the facility as a result of it not being SEPP 33 applicable.

Furthermore, the impact of transporting DGs as a result of DG storage was reviewed with reference to the SEPP33 thresholds for transport. The review indicated that the quantities being transported would be below the minimum transport loads as this would indicate extremely high turnover of product within the warehouse. Therefore, it was concluded that the transport limits were not exceeded and that no further transport incident management would be required. It is further noted that the appropriate incident response would be managed by the transporter as required by the ADG Code.

6. REFERENCES

- [1] Department of Planning, "Applying SEPP 33," Department of Planning, Sydney, 2011.
- [2] Road Safety Council, The Australian Code for the Transport of Dangerous Goods by Road and Rail Edition 7.4, Canberra: Road Safety Council, 2016.