



## FRASERS-ALTIS MAMRE ROAD REDEVELOPMENT SEPP33 ASSESSMENT

Frasers-Altis Mamre Road Redevelopment - SEPP33 Assessment  
Document No. Q17-109[Frasers-Altis]-RPTFinal(Rev3)-13May19  
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Prepared by

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## Quality Management

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A	10 June 18	Draft for Comment	S. Sylvester	-
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## EXECUTIVE SUMMARY

### INTRODUCTION

Frasers Property Industrial Constructions Pty Ltd and Altis Property Partners Pty Ltd (Frasers/Altis) proposes to develop land on the western side of Mamre Road, Kemps Creek, NSW (the Project). The land will require a State Significant Development (SSD) Application for the proposed use, hence, Secretary's Environmental Assessment Requirements (SEARs, Ref. SSD 9522) have been issued that require the storage of DGs to be assessed under State Environmental Planning Policy No.33 (SEPP33, Ref.1), which requires review of the proposed development using the document "Applying SEPP33" (Ref.1).

RiskEng Pty Ltd (RiskEng) has been commissioned to conduct the SEPP33 assessment of the Project, the objectives of which to identify whether the quantities of Dangerous Goods proposed for storage at the various warehouse within the development Project do not exceed the SEPP33 threshold and, in the event any warehouses exceed the SEPP33 DG storage threshold values, to recommend a Preliminary Hazard Analysis study for the specific warehouse.

### METHODOLOGY

The Secretary's Environmental Assessment Requirements (SEARs – SSD 9522) require a number of conditions to be met as part of the proposed State Significant Development Application. The SEARs section relating to key issues includes a requirement to address hazards and risks (Dot Point 13 in the Key Issues section). This dot point states that a preliminary screening must be carried out in accordance with SEPP33, providing details of the proposed storage of Dangerous Goods (DGs) and the location of these goods within each facility. Where the SEPP33 screening thresholds are exceeded, the SEARs require a Preliminary Hazard Analysis (PHA) to be conducted to demonstrate that the risks associated with the operations of facilities do not exceed acceptable risk criteria.

The methodology applied to the SEPP33 assessment of the Project was that recommended in "Applying SEPP33 - Hazardous and Offensive Developments"(Ref.1). The quantity of DGs stored in each warehouse within the Project was reviewed in turn against the threshold levels listed in SEPP33 (Ref.1) to identify whether the threshold levels are exceeded. In the event a threshold levels is exceeded, a PHA study is recommended. The results of the assessment are summarise below.

### BRIEF DESCRIPTION OF THE PROJECT

The Project comprises the following warehouses:

- Lot 1 - Warehouses 1A and 1B (Joined by a common wall);
- Lot 2 - Warehouse 2 (freestanding warehouse, no common wall);
- Lot 3 - Warehouses 3A and 3B (Joined by a common wall);
- Lot 4 - Warehouse 4 (freestanding warehouse, no common wall);
- Lot 5 - Warehouses 5A & 5B (Joined by a common wall);
- Lot 6 - Warehouse 6 (freestanding warehouse, no common wall);

Note: warehouse numbers are shown on **Figure 1.1**.

## SUMMARY & CONCLUSION

An analysis of the application of State Environmental Planning Policy No.33, Hazardous and Offensive Developments (SEPP33) was conducted for the proposed Frasers-Altis development on Mamre Road, Kemps Creek, NSW. The proposed development involves the construction of 9 warehouses on a parcel of land located to the west of Mamre Road, Kemps Creek. The analysis was conducted based on a limited quantity of Dangerous Goods (DGs) stored and handled at each warehouse, noting that the development has considered the potential for warehouse tenants to store and handle limited DGs as part of their operations.

The analysis identified that the quantity of DGs held at each warehouse did not exceed the storage threshold levels listed in “Applying SEPP33”(Ref.1). It was also identified that the relatively low quantity of DGs stored and handled, and the type of operations proposed at the warehouses (i.e. warehouses are not dedicated DG storage facilities), it was unlikely to result in exceeding the maximum permissible transport quantity and number of vehicle operation listed in “Applying SEPP33”(Ref.1). Hence, based on the assessment conducted in this study, it is concluded that SEPP33 does not apply to the proposed development.

Based on the assessment conducted in this study and the results indicating that SEPP33 does not apply to any of the warehouses within the development, it is concluded that the requirements of the Hazard and Risk Section of the SEARs (Key Issues, Dot point 13) have been addressed.

## RECOMMENDATION

Notwithstanding the conclusion reached above, it is noted that tenants may require to store DGs at quantities exceeding those assessed in this study. Should a tenant require to store and handle additional DGs to those listed for the specific warehouse in this study, it is recommended that a review of the application of SEPP33 should be conducted and where required a Preliminary Hazard Analysis (PHA) study be performed should it be identified that SEPP33 applies to the specific warehouse.

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**ABBREVIATIONS**

Abbreviation	Description
ADG	Australian Dangerous Goods Code
AS	Australian Standard
C1	Combustible Liquid (Flash Point between 60°C and 93°C)
C2	Combustible Liquid (Flash Point >93°C)
Cyl.	Cylinder
DA	Development Application
DG	Dangerous Goods
DPE	Department of Planning and Environment
kg	kilograms
LPG	Liquefied Petroleum Gas
m	metres
m <sup>2</sup>	square metres
PG	Packaging Group
PHA	Preliminary Hazard Analysis
SEARs	Secretary's Environmental Assessment Requirements
SEPP33	State Environmental Planning Policy No. 33
t	tonnes

# 1 INTRODUCTION

## 1.1 Background

Frasers Property Industrial Constructions Pty Ltd and Altis Property Partners Pty Ltd (Frasers/Altis) proposes to develop land on the western side of Mamre Road, Kemps Creek, NSW. As part of the development, it will be necessary to submit a State Significant Development Application for the land for the proposed use, hence, the Department of Planning and Environment (DPE) has issued the Secretary's Environmental Assessment Requirements (SEARs) that include a review of the proposed storage and handling of Dangerous Goods (DGs). The SEARs require the DGs to be assessed under State Environmental Planning Policy No.33 (SEPP33, Ref.1), which requires review of the proposed development using the document "Applying SEPP33" (Ref.1).

Frasers/Altis has commissioned RiskEng Pty Ltd (RiskEng) to conduct a review of the proposed development with regards to the storage and handling of DGs. This document provides RiskEng's SEPP33 assessment of the proposed land development at Mamre Road, Kemps Creek, NSW,

## 1.2 Objectives

The objectives of the SEPP33 assessment for the land development at Mamre Road, Kemps Creek, NSW is to identify whether the quantities of Dangerous Goods proposed for storage at the various warehouse within the development area do not exceed the SEPP33 threshold and, in the event any warehouses exceed the SEPP33 DG storage threshold values, to recommend a Preliminary Hazard Analysis study for the specific warehouse.

## 1.3 Scope of Work

The scope of work for the study is for the SEPP33 assessment of the Frasers/Altis land development project at Mamre Road, Kemps Creek, NSW (the Project). The scope covers 9 warehouses in the proposed development area as shown on **Figure 1.1**. The scope includes the development of a report for each of the warehouses detailing maximum permissible storage quantities below which the SEPP33 would not apply to the development. The following warehouses are included in the assessment;

- Lot 1 - Warehouses 1A and 1B (Joined by a common wall);
- Lot 2 - Warehouse 2 (freestanding warehouse, no common wall);
- Lot 3 - Warehouses 3A and 3B (Joined by a common wall);
- Lot 4 - Warehouse 4 (freestanding warehouse, no common wall);
- Lot 5 - Warehouses 5A & 5B (Joined by a common wall);
- Lot 6 - Warehouse 6 (freestanding warehouse, no common wall);

Note: warehouse numbers are shown on **Figure 1.1**.

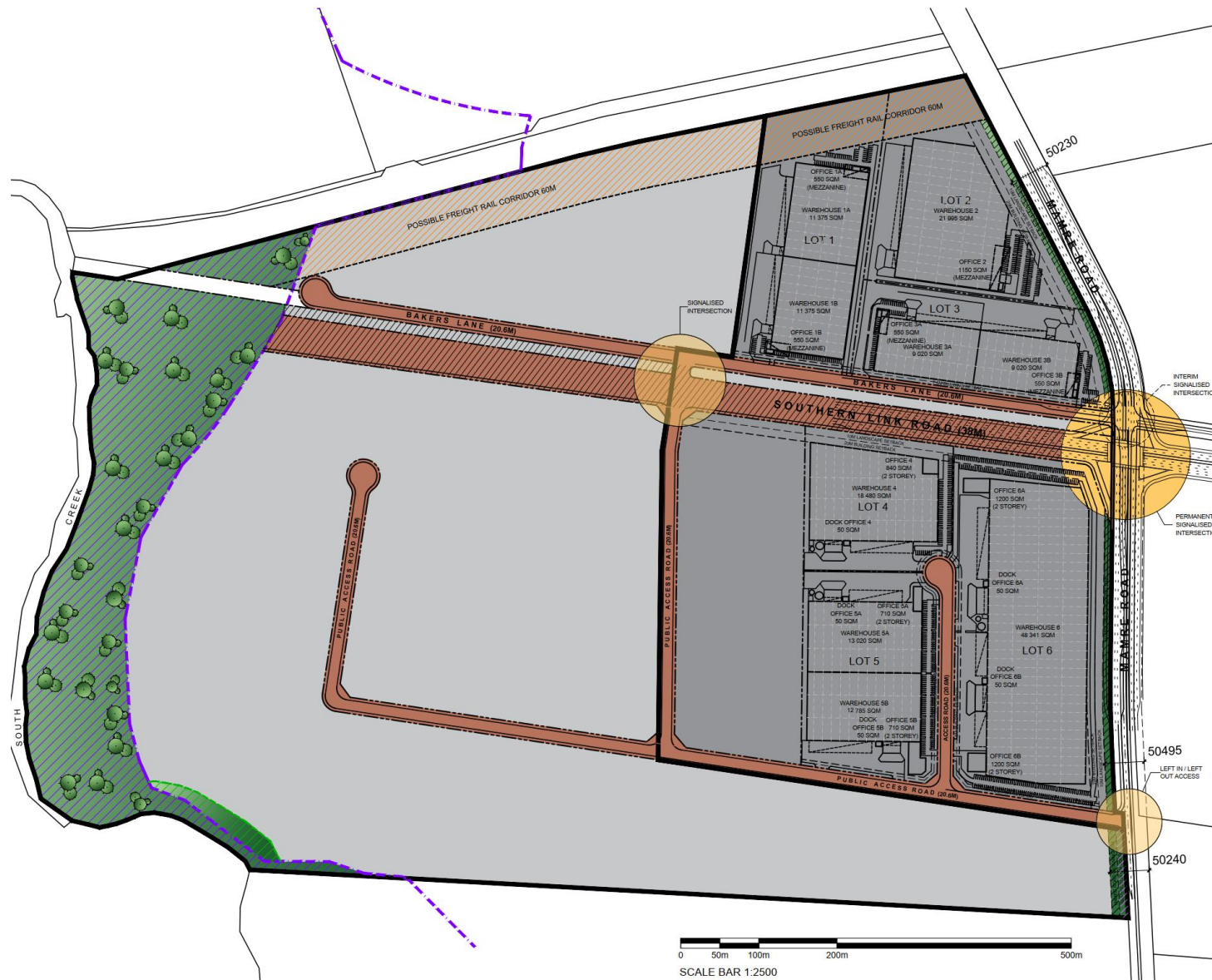


Figure 1.1: Layout of the Proposed Frasers-Altis Development, Mamre Road, Kemp's Creek, NSW

## 2 METHODOLOGY

### 2.1 Study Requirements (SEARs)

The Secretary's Environmental Assessment Requirements (SEARs – SSD 9522) require a number of conditions to be met as part of the proposed State Significant Development Application. The SEARs section relating to key issues includes a requirement to address hazards and risks (Dot Point 13). This section states that a preliminary screening must be carried out in accordance with SEPP33, providing details of the proposed storage of Dangerous Goods (DGs) and the location of these goods within each facility. Where the SEPP33 screening thresholds are exceeded, the SEARs require a Preliminary Hazard Analysis (PHA) to be conducted to demonstrate that the risks associated with the operations of facilities do not exceed acceptable risk criteria.

### 2.2 Study Background

The proposed development at Mamre Road, Kemps Creek, NSW, will comprise six (6) Lots and nine (9) warehouses, with warehouses on three (3) lots being constructed as adjoining facilities with a common wall between the warehouses. The development submission is for development of the land so that warehouse facilities may be constructed and operated. At this stage of the project tenants and operators are unknown, hence, the exact quantity of Dangerous Goods proposed for storage at the various warehouses is unknown.

In order to provide operational flexibility for warehouse occupants, it is proposed to submit Development Applications (DAs) for individual warehouses with an allowance for limited storage of Dangerous Goods (DGs). In many cases, warehouse facilities store limited DGs during logistics operations and short-term storage campaigns, hence, flexibility of storage and the ability to store limited quantities is a key function of efficient logistic operations.

Based on this, each warehouse will be reviewed, its use assessed and the maximum quantities of DGs selected, that would be stored, to allow future tenants to select an appropriate warehouse for their operation.

### 2.3 Study Approach

The following study approach was be applied:

- An overall review of the development and warehouse layouts was conducted to determine whether maximum permissible quantities can be stored in individual warehouses or whether the close proximity of warehouses will require consolidation of the maximum permissible quantities distributed between the two closely located buildings;
- Once the DG distribution was assessed, location of DGs within the warehouses was allocated, based on required layouts in SEPP33 (Ref.1, e.g. separation of flammable liquids from boundaries and other DGs, etc.);
- A layout for each warehouse was then developed and confirmed with the developer before final report completion;
- Once all DG quantities and layouts were confirmed a draft report was developed containing details of each warehouse location; and
- A final report was issued for submission with the development documentation.

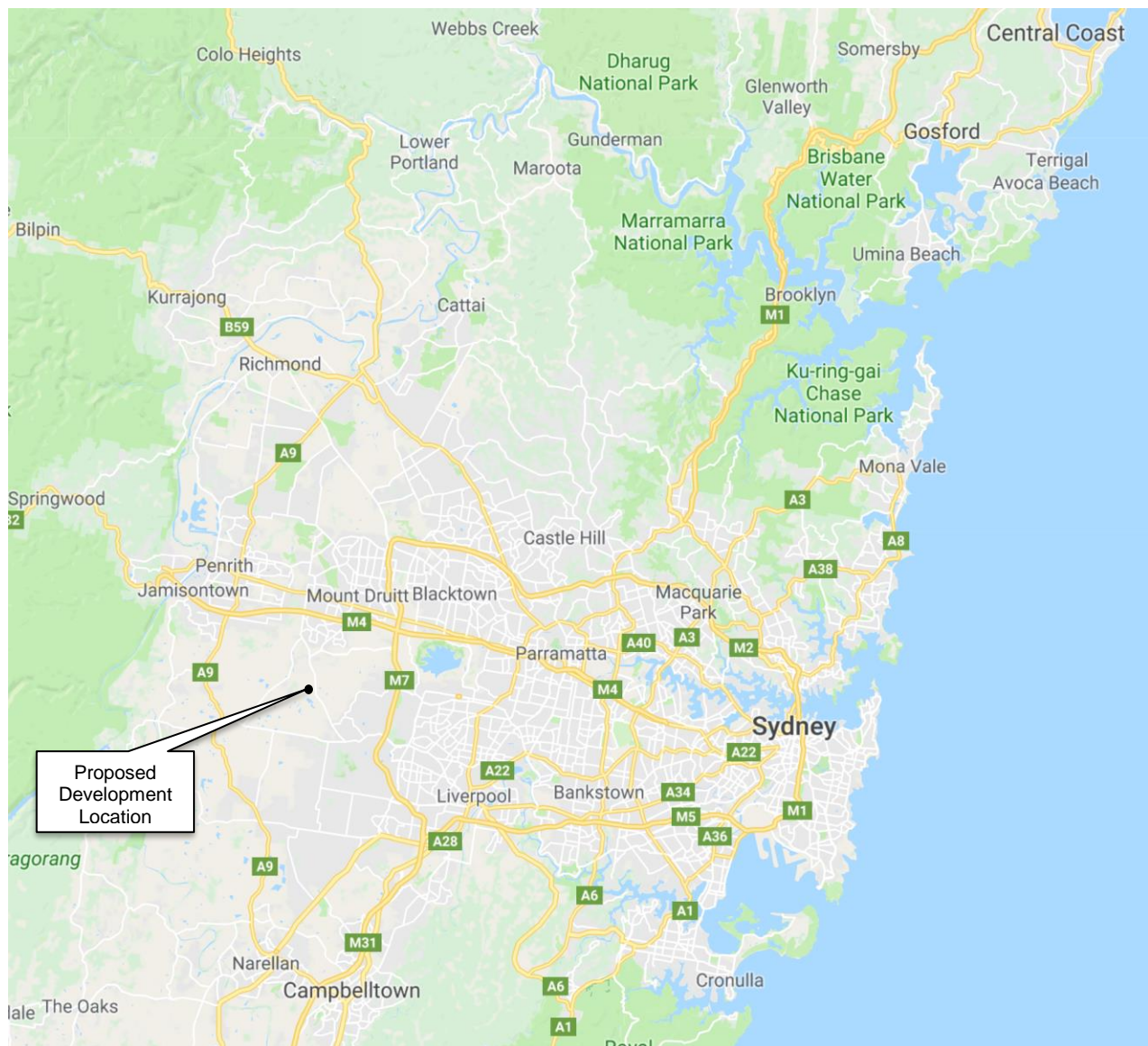
The results of the study and fulfilment of the SEARs requirements are provided in **Section 4**.

### 3 BRIEF DESCRIPTION OF THE WAREHOUSE DEVELOPMENT

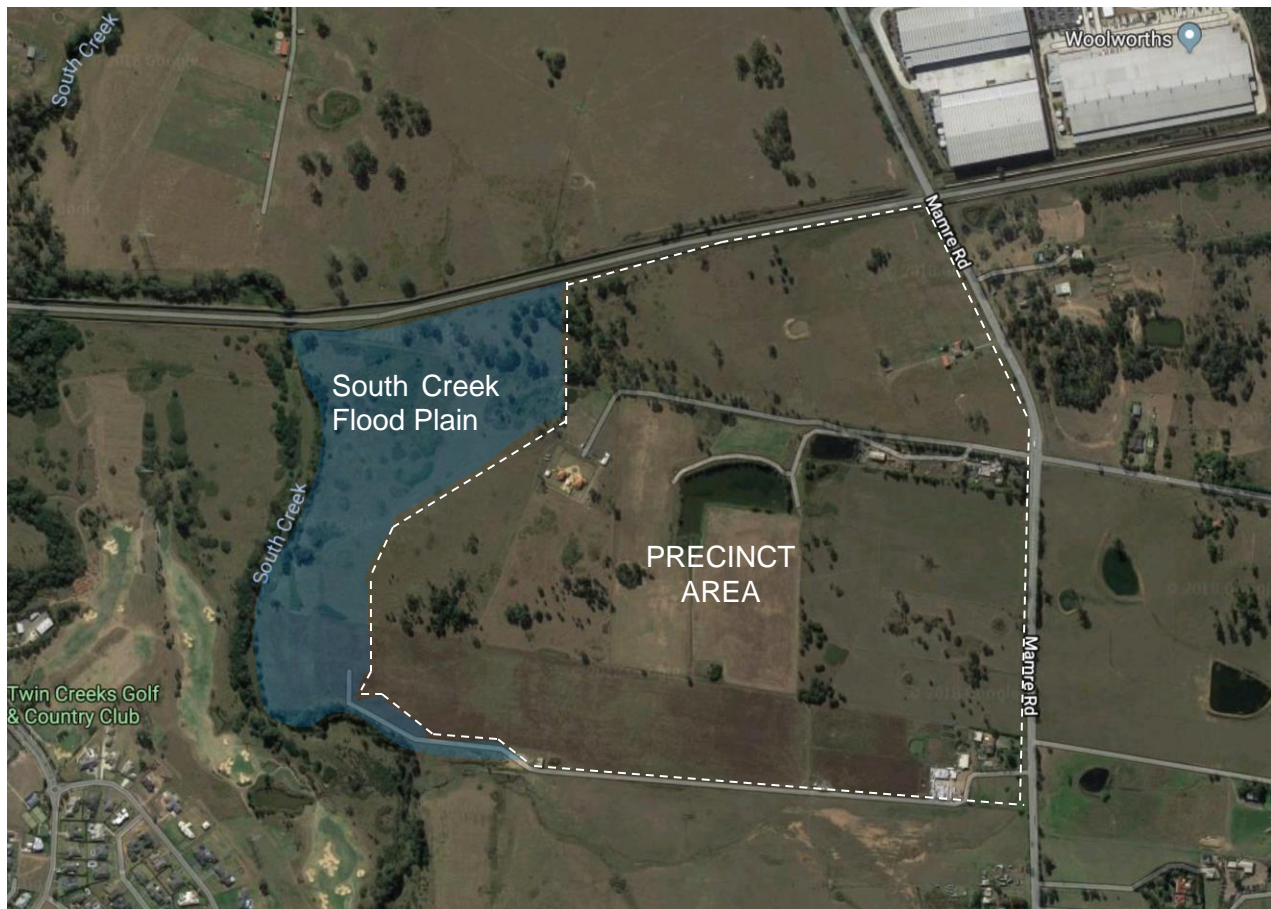
#### 3.1 Site Location and Surrounding Land Uses

The Project will be located in Kemps Creek, NSW, between Mamre Road and South Creek. The area is predominantly rural, with a warehouse development located across Mamre road to the north east and the Twin Creeks Gold & Country Club located across the South Creek buffer zone to the west. The land directly to the north is the Altis First Estate Industrial Development and land to the south currently vacant (rural). The Sydney Catchment Authority pipeline from Warragamba to Prospect is also located on the northern boundary of the site.

**Figure 3.1** shows the regional location of the Project and **Figure 3.2** shows the detailed location in the Kemps Creek area.



**Figure 3.1: Regional Location of the Proposed Frasers-Altis Warehouse Development, Kemps Creek**



**Figure 3.2: Location of the Proposed Frasers-Altis Warehouse Development in Kemps Creek**

### 3.2 Brief description of the Proposed Project

Figures 3.3 & 3.4 show the proposed project layout and various warehouse locations within the precinct. The Project is split into two main areas, the Northern Precinct Areas (**Figure 3.3**) and the Southern Precinct Area (**Figure 3.4**). These two areas are split by the proposed estate road and Southern Link Road, which is about 20.1m wide and 3m wide respectively. A brief description of each Lot and warehouse facility is provided below.

#### SOUTHERN PRECINCT AREA

- Lot 6 - Warehouse 6 is located adjacent to Mamre Road. The warehouse will be 48,341 m<sup>2</sup> with the long axis of the building is located north/south, with a property setback from Mamre Road of 20m (consisting 10m building setback and 10m landscaping setback). It is noted that Mamre Road will be widened by 10m as part of the project. The closest point of Warehouse 6 to the Southern Link Road is around 25m, which is open space consisting landscaping, building setback and car park areas. This distance between Warehouse 6 to Warehouse 5A and 5B is around 60m and to warehouse 8 is around 54m.
- Lot 4 - Warehouse 4 (freestanding warehouse, no common wall) is located directly adjacent to the Southern Link Road, which is provided for access to the Project (i.e. access to the various warehouses within the precinct), however, it is noted that access to Warehouse 4 is gained via public access roads from the southern side of the precinct. Warehouse 4 will be 18,480 m<sup>2</sup>.

Warehouse 4 will be set back 20m from Southern Link Road, which comprises a 10m building setback and a 10m landscape area. Warehouse 4 is located 6.2m from the boundary to the west, a provision for fire vehicle access.

- Lot 5 – Warehouses 5A and 5B (Joined by a common wall) are located adjacent to the public access road on the southern side of the precinct. Warehouse 5A will be 13,020 m<sup>2</sup> and Warehouse 5B will be 12,785 m<sup>2</sup>. The long axis of the building is located north/south, with a property setback from the southern public access road of around 30m. The eastern side of Warehouses face another public access road and is separated from the road by a distance of about 25m (consisting car park area and landscaping). The western side of the warehouses face currently vacant land with a 6.2m separation between the warehouse building and the boundary for fire vehicle access. The northern side of the warehouse comprises the loading docks and forecourt, as does the opposing warehouse 4 on lot 22. The separation distance between the two warehouses is around 58m.

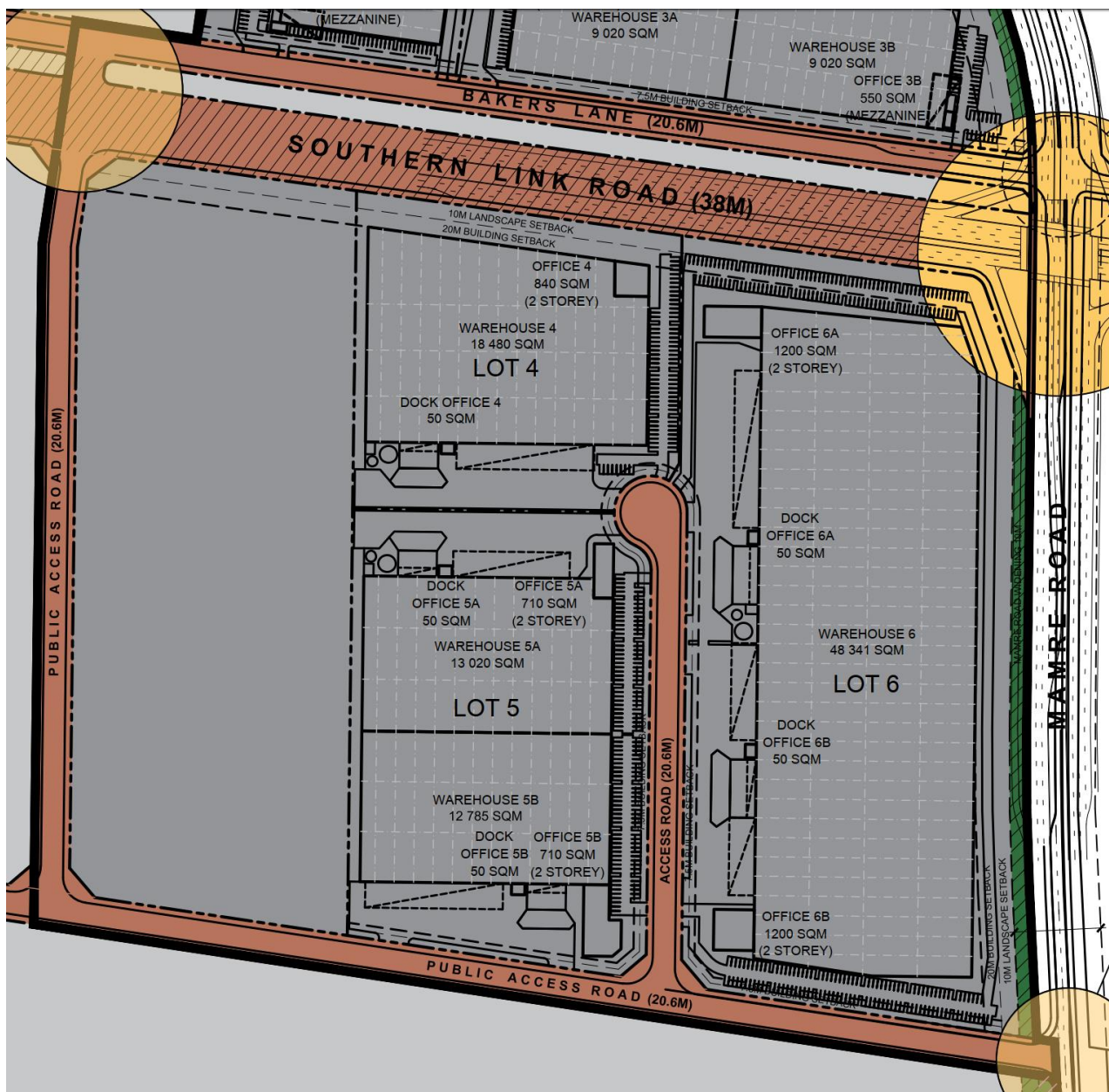


Figure 3.3: Southern Precinct Layout

## NORTHERN PRECINCT AREA

- Lot 3 - Warehouses 3A and 3B (Joined by a common wall) are located adjacent to Bakers Lane. Warehouses 3A and 3B will be 9,020 m<sup>2</sup> each. The long axis of the building is located east/west, with a property setback from Bakers Lane of 7.5m. The eastern side of Warehouse 3B faces Mamre Road and is separated from the road by a distance of about 20m (consisting 10m building setback, 10m landscaping setback and car park area). Warehouse 3A faces Warehouse 1B (to the west) and is separated from this warehouse by a distance of around 42m. Warehouse 2 (to the north) is separated from Warehouses 3A & 3B by the warehouse forecourt, a distance of 58m between the warehouse buildings.
- Lot 2 - Warehouse 2 (freestanding warehouse, no common wall) faces Mamre Road to the east and is 21,995m<sup>2</sup> in area. The building is set back from Mamre Road by a distance of 20m (consisting 10m building setback and 10m landscaping setback). A 7.5m building setback is provided on the northern boundary and the truck loading area separates Warehouse 2 from Warehouse 1A by a distance of around 50m.
- Lot 1 - Warehouses 1A and 1B (Joined by a common wall) are located adjacent to the western boundary of the Precinct. Warehouses 1A & 1B will each be 11,375 m<sup>2</sup> in area. The long axis of the building is located north/south, with a Warehouse buildings separated from the western boundary by the truck loading area, a distance of around 50m. Warehouse 1A is separated from the northern boundary by the site parking area, however, the corner of the building is only 7.5m from the site boundary. Warehouse 1B is separated from the southern boundary (adjacent to Bakers Lane) by the site parking area, a distance of around 25m.

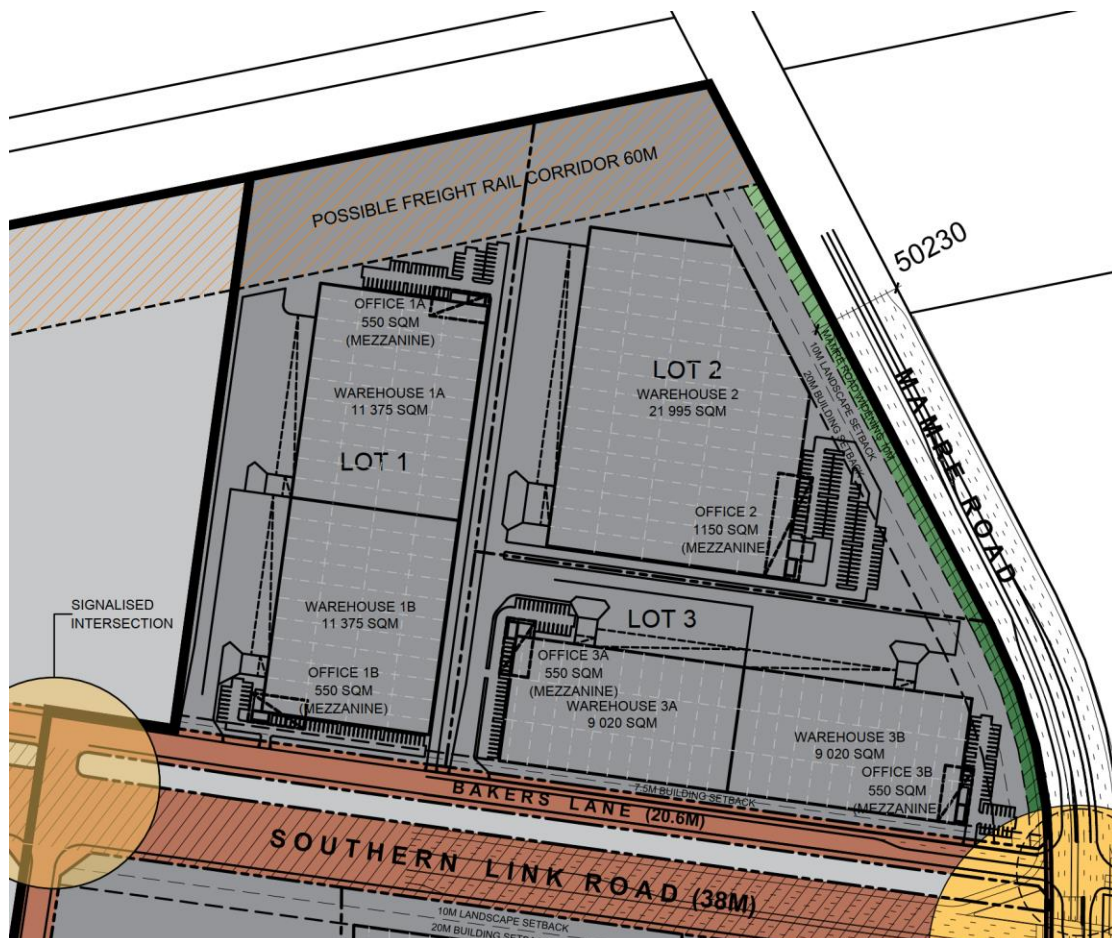


Figure 3.4: Northern Precinct Layout

## 4 STUDY RESULTS

### 4.1 Lot 6 – Warehouses 6

#### 4.1.1 SEPP33 Storage Assessment (Warehouses 6)

**Figure 4.1** shows the layout of Warehouses 6, including the location of DGs within the warehouses. The figure also shows the location of the warehouse in relation to the surrounding land uses, including separation distances between the warehouses and the boundaries.

The quantity of DGs that are proposed for storage in the warehouses is shown in **Table 4.1**. It is noted that Warehouse 6 is a freestanding warehouse. Hence, only the single warehouse is assessed for the purposes of the SEPP33 review.

Threshold limits for the application of SEPP 33 to Warehouses 6 are presented in **Table 4.1** along with maximum DG quantities that will be stored in the warehouse. **Figure 4.2** shows the maximum permissible quantity of flammable liquids that may be stored in the warehouse, as listed in SEPP33, based on the specific separation distances of the flammable liquids storages areas from the boundary (Ref.1).

**Table 4.1** shows that threshold quantities are not exceeded at Warehouses 6 and **Figure 4.2** shows that the maximum permissible storage quantities of flammable liquids is not exceeded, hence, SEPP 33 does not apply, as all DGs are under the screening threshold.

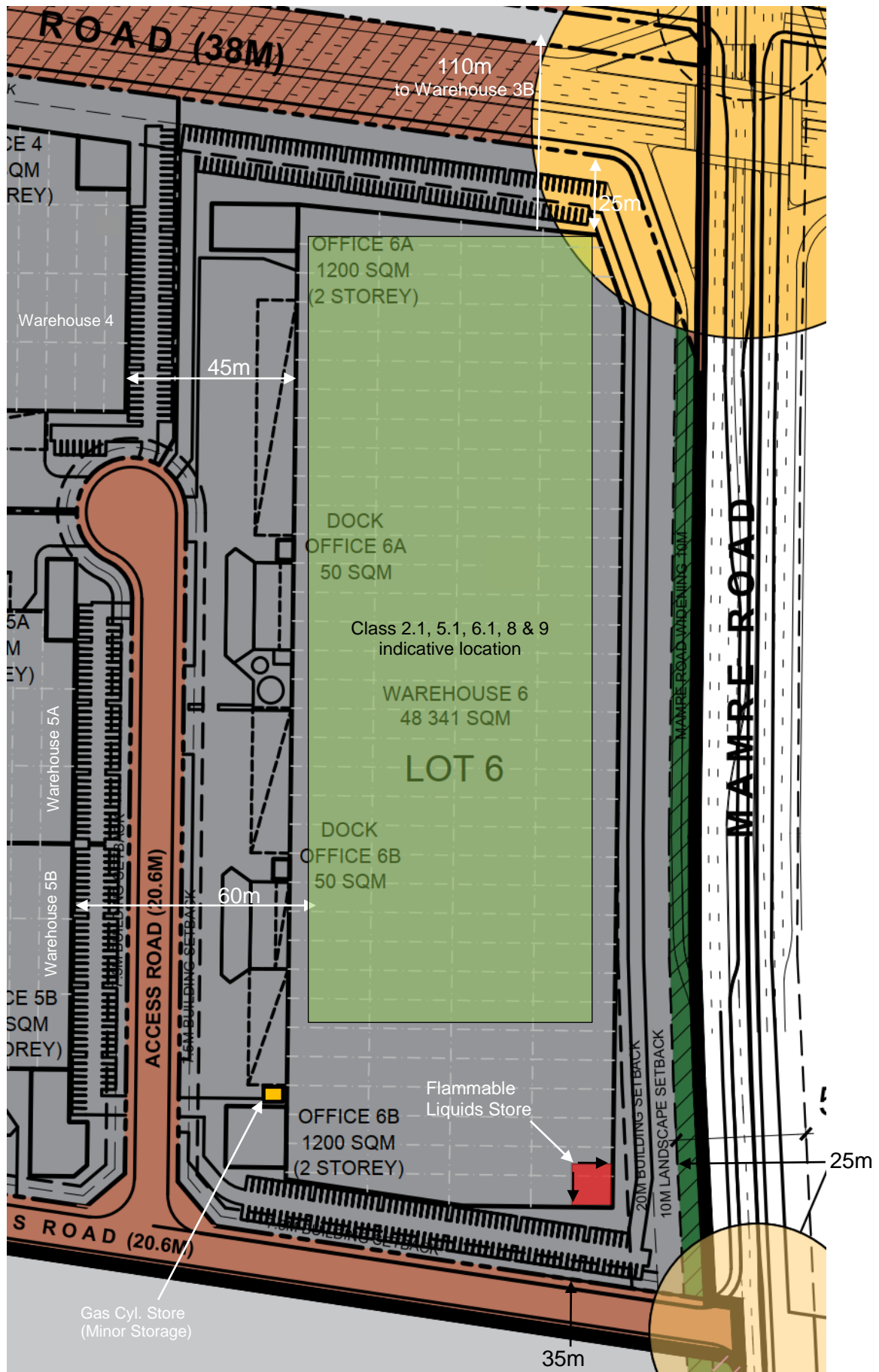
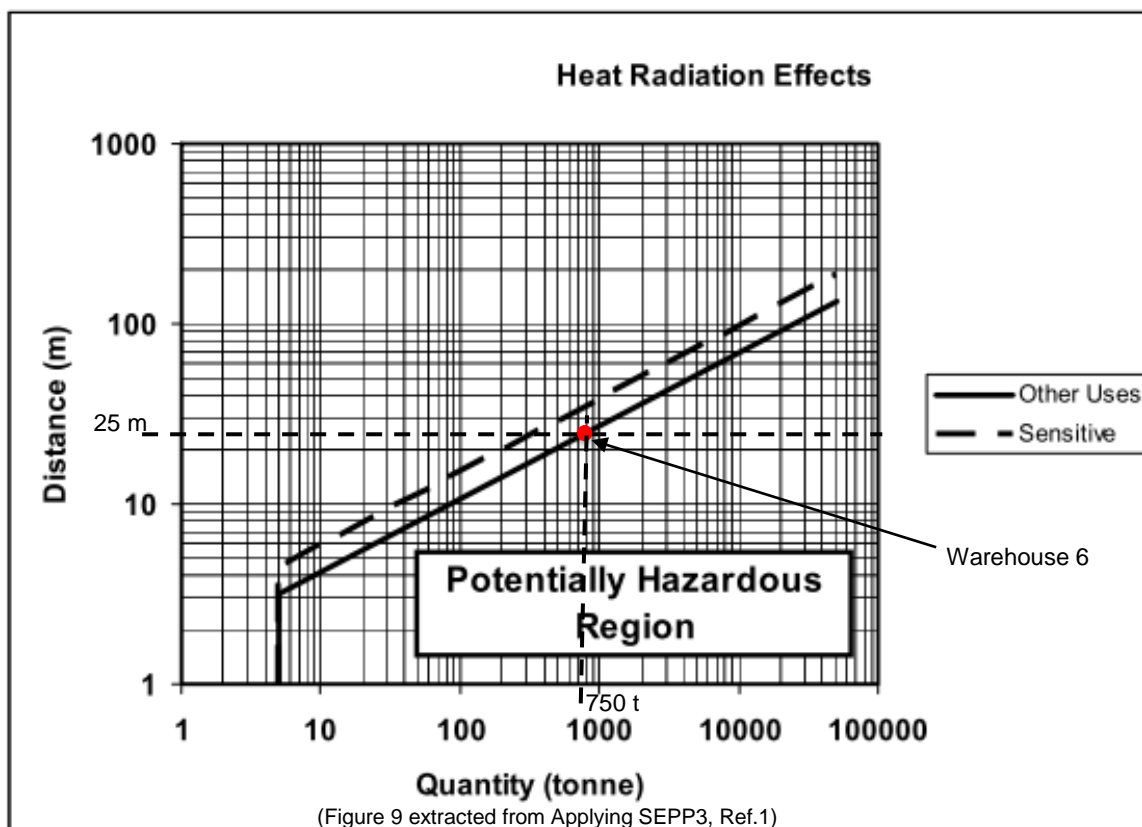


Figure 4.1: Lot 6 - Warehouses 6 Layout showing DG Locations

**Table 4.1: Quantities Stored in Warehouse 6 and SEPP33 Threshold Values for the Specific DGs Stored**

Class	Description	PG	Quantities Stored	SEPP 33 Threshold (Ref.1)	Does SEPP33 Apply?
			Warehouse 6 Total		
2.1	Aerosols	-	9,000 kg	10,000 kg	NO
	Cylinders	-			
3	Flammable Liquids	II & III	50,000 kg	750,000 kg	NO (See Fig. 4.2 & Note 1 below)
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	24,000 kg	25,000 kg <sup>(Note 2)</sup>	NO
9	Miscellaneous	II & III	40,000 kg	Not subject to SEPP33	
C1/C2	Combustible Liquids	-	40,000 kg	Not subject to SEPP33	

- Notes: 1. The flammable liquids store is located on the south-eastern corner of Warehouse 6, with the closest boundary to the east being 25m for Warehouse 6 from the bund of the flammable liquids stores. The distances to the other boundaries from the storage areas are greater than the distances to the east, hence, the boundaries are well separated from the storage and the facility is therefore not within the potentially hazardous region of Figure 9 of Applying SEPP33 (see **Figure 4.2**).
2. The threshold value for Class 8 products has been selected as the lower value of PG II & III, being 25,000 kg (noting that PG III corrosives can be stored up to a quantity of 50,000 kg).



**Figure 4.2: Class 3 PGII & III Flammable Liquids Storage - Warehouses 6**

#### 4.1.2 SEPP33 Transport Assessment (Warehouse 6)

It is necessary to assess the impact of transporting DGs on the surrounding arterial roads to and from Warehouse 6. As the total quantities to be stored in the warehouse is below SEPP 33, it can be assumed that the frequency of movements would be low. Therefore, it is considered prudent to review the SEPP 33 transport criteria on the basis of minimum transport load listed in the guideline (Applying SEPP33, Ref.1). **Table 4.2** 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 4.2: SEPP33 Transport Quantity vs Warehouse Storage Limits - Warehouses 6**

Class	Minimum Load Quantity	Maximum Storage within Each Warehouse
2.1	4.5 tonnes	4 tonnes
3(II)	10 tonnes	20 tonnes
3(III)	No limits	30 tonnes
4.1	2 tonnes	2 tonnes
5.1	5 tonnes	2 tonnes
6.1	3 tonnes	1 tonnes
8	5 tonnes	12 tonnes
9	No Limit	20 tonnes
Combustible Liquid	No Limit	20 tonnes

Based on the maximum quantity to be stored in warehouse 6 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 non-DG products, resulting in the majority of vehicles not carrying DGs. In addition, those movements where DGs are transported as a combined load (Non-DGs and DGs together), the majority of loads would be below the transport placard quantity, which does not exceed the maximum load quantities listed in **Table 4.2**.

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.

## 4.2 Lot 4 – Warehouse 4

### 4.2.1 SEPP33 Storage Assessment (Warehouse 4)

**Figure 4.3** shows the layout of Warehouse 4, including the location of DGs within the warehouse. The figure also shows the location of the warehouse in relation to the surrounding land uses, including separation distances between the warehouses and the boundaries.

Threshold limits for the application of SEPP 33 to Warehouse 4 are presented in **Table 4.3** along with maximum DG quantities that will be stored in the warehouses. **Figure 4.4** shows the maximum permissible quantity of flammable liquids that may be stored in each warehouse, as listed in SEPP33, based on the specific separation distances of the flammable liquids storages areas from the boundary (Ref.1).

**Table 4.3** shows that threshold quantities are not exceeded at Warehouse 4 and **Figure 4.4** shows that the maximum permissible storage quantities of flammable liquids is not exceeded, hence, SEPP 33 does not apply, as all DGs are under the screening threshold.

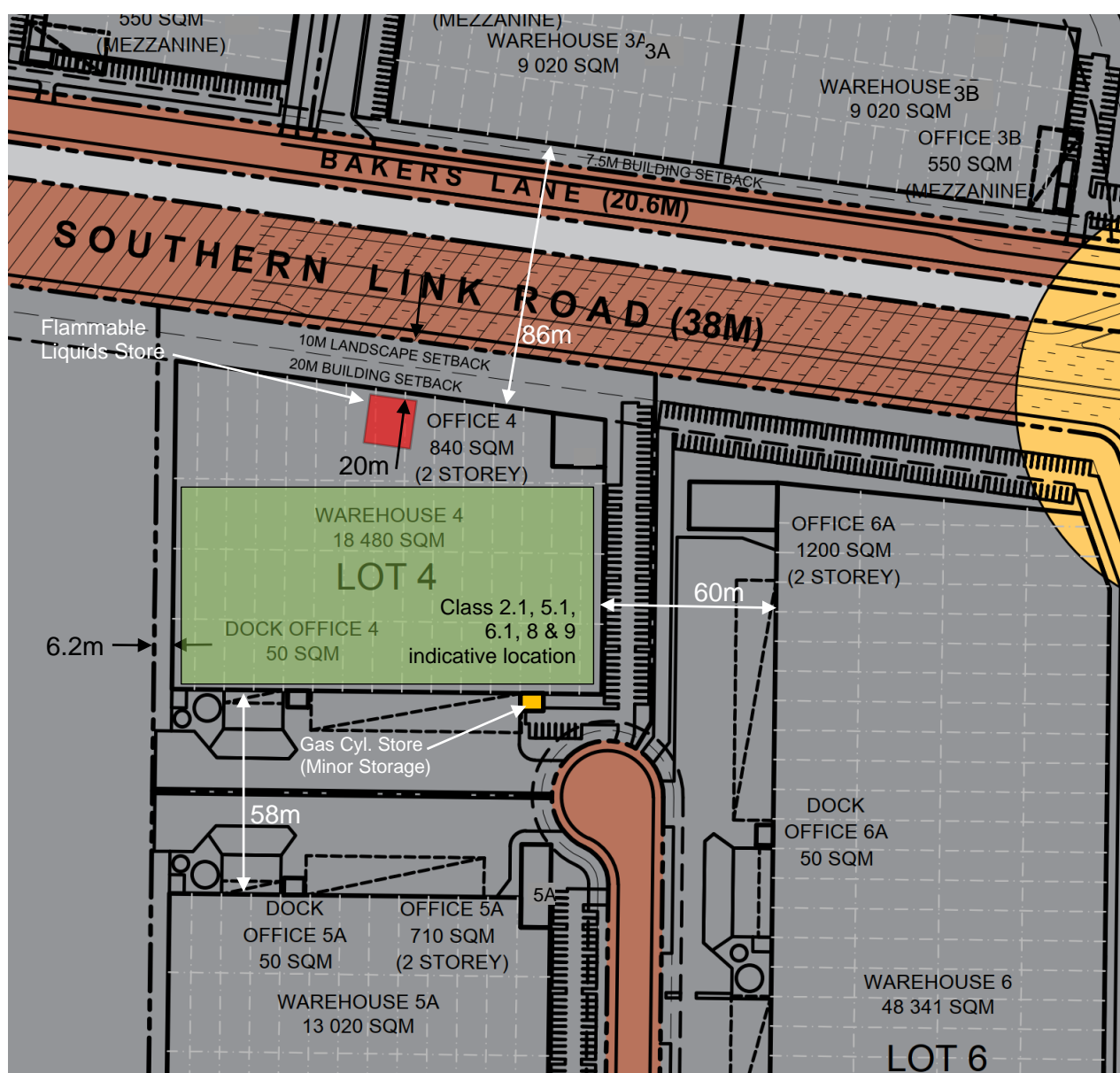


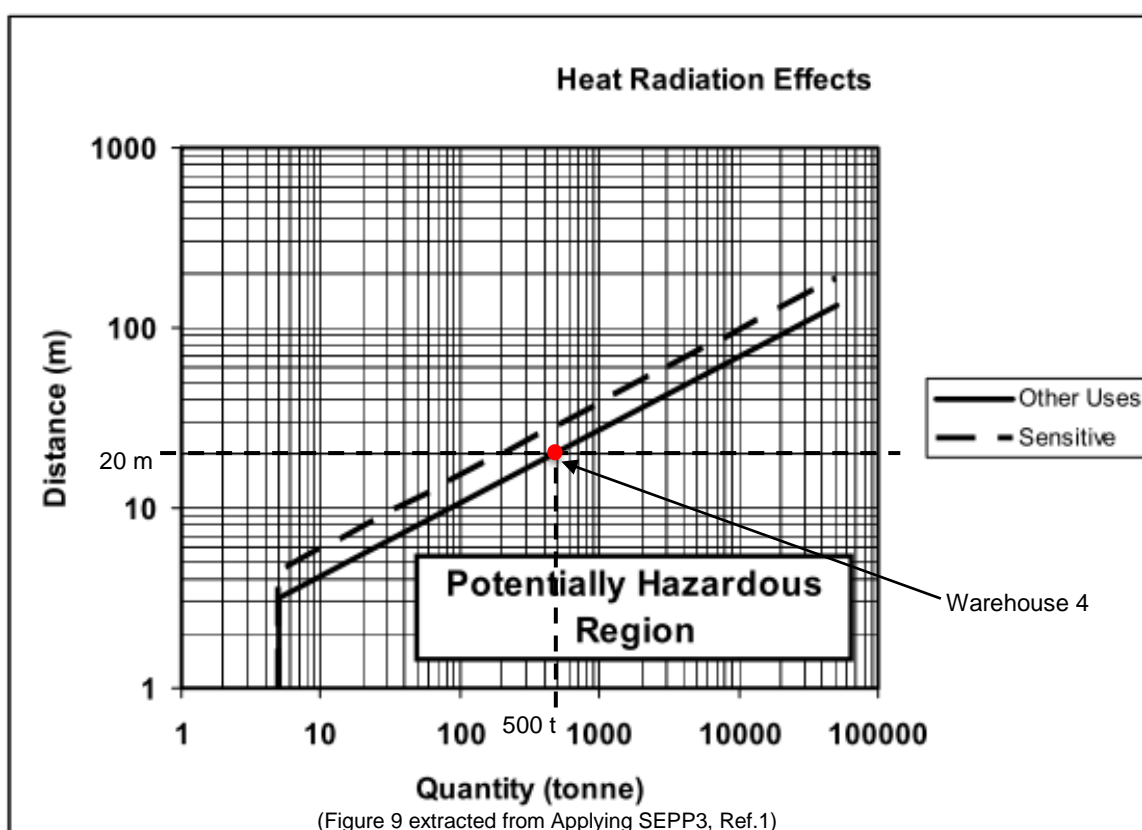
Figure 4.3: Lot 4 - Warehouses 4 Layout showing DG Locations

Table 4.3: Quantities Stored in Warehouse 4 and SEPP33 Threshold Values for Specific DGs Stored

Class	Description	PG	Quantities Stored	SEPP 33 Threshold (Ref.1)	Does SEPP33 Apply?
			Warehouse 4		
2.1	Aerosols	-	<7,000 kg (LPG)	10,000 kg	NO
	Cylinders	-	<1,000 kg (LPG)		
3	Flammable Liquids	II & III	20,000 kg (PGII) 30,000 kg (PGIII)	500,000 kg	NO (See Fig. 4.4 & Note 1 below)
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

Class	Description	PG	Quantities Stored	SEPP 33 Threshold (Ref.1)	Does SEPP33 Apply?
			Warehouse 4		
6.1	Toxic Substances	II & III	2,000 kg	2,500 kg	NO
8	Corrosives	II & III	20,000 kg	25,000 kg <sup>(Note 2)</sup>	NO
9	Miscellaneous	II & III	20,000 kg	Not subject to SEPP33	
C1/C2	Combustible Liquids	-	20,000 kg	Not subject to SEPP33	

- Notes: 1. The flammable liquids store is located on the north-eastern corner of Warehouse 4, with the closest boundary to the east being 20m to the north from the bund of the flammable liquids store. The distances to the other boundaries from the storage area is greater than the distances to the north, hence, the boundaries are well separated from the warehouse and the facility is therefore not within the potentially hazardous region of Figure 9 of Applying SEPP33 (see **Figure 4.4**).
2. The threshold value for Class 8 products has been selected as the lower value of PG II & III, being 25,000 kg (noting that PG III corrosives can be stored up to a quantity of 50,000 kg).



**Figure 4.4: Class 3 PGII & III Flammable Liquids Storage - Warehouse 4**

#### 4.2.2 SEPP33 Transport Assessment (Warehouse 4)

The assessment of the impact of transporting DGs on the surrounding arterial roads to and from Warehouses 4 is assessed in this section. As the total quantities to be stored in the warehouse are below SEPP 33, it can be assumed that the frequency of movements would be low. Therefore, it is considered prudent to review the SEPP 33 transport criteria on the basis of minimum transport load listed in the guideline (Applying SEPP33, Ref.1). **Table 4.4** has been developed based on the minimum load of goods to compare the maximum storage quantity within the warehouses to conceptualise whether the loads would be likely to be exceeded based on the maximum storage quantities.

**Table 4.4: SEPP33 Transport Quantity vs Warehouse Storage Limits - Warehouses 4**

Class	Minimum Load Quantity	Maximum Storage within Each Warehouse
2.1	4.5 tonnes	8 tonnes
3(II)	10 tonnes	20 tonnes
3(III)	No limits	30 tonnes
4.1	2 tonnes	4 tonnes
5.1	5 tonnes	4 tonnes
6.1	3 tonnes	2 tonnes
8	5 tonnes	20 tonnes
9	No Limit	20 tonnes
Combustible Liquid	No Limit	20 tonnes

Based on the maximum quantity to be stored in the warehouse (Warehouse 4) 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 non-DG products, resulting in the majority of vehicles not carrying DGs. In addition, those movements where DGs are transported as a combined load (Non-DGs and DGs together), the majority of loads would be below the transport placard quantity (around 1 tonnes of DGs), which does not exceed the maximum load quantities listed in **Table 4.4**.

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.

### 4.3 Lot 5 – Warehouses 5A & 5B

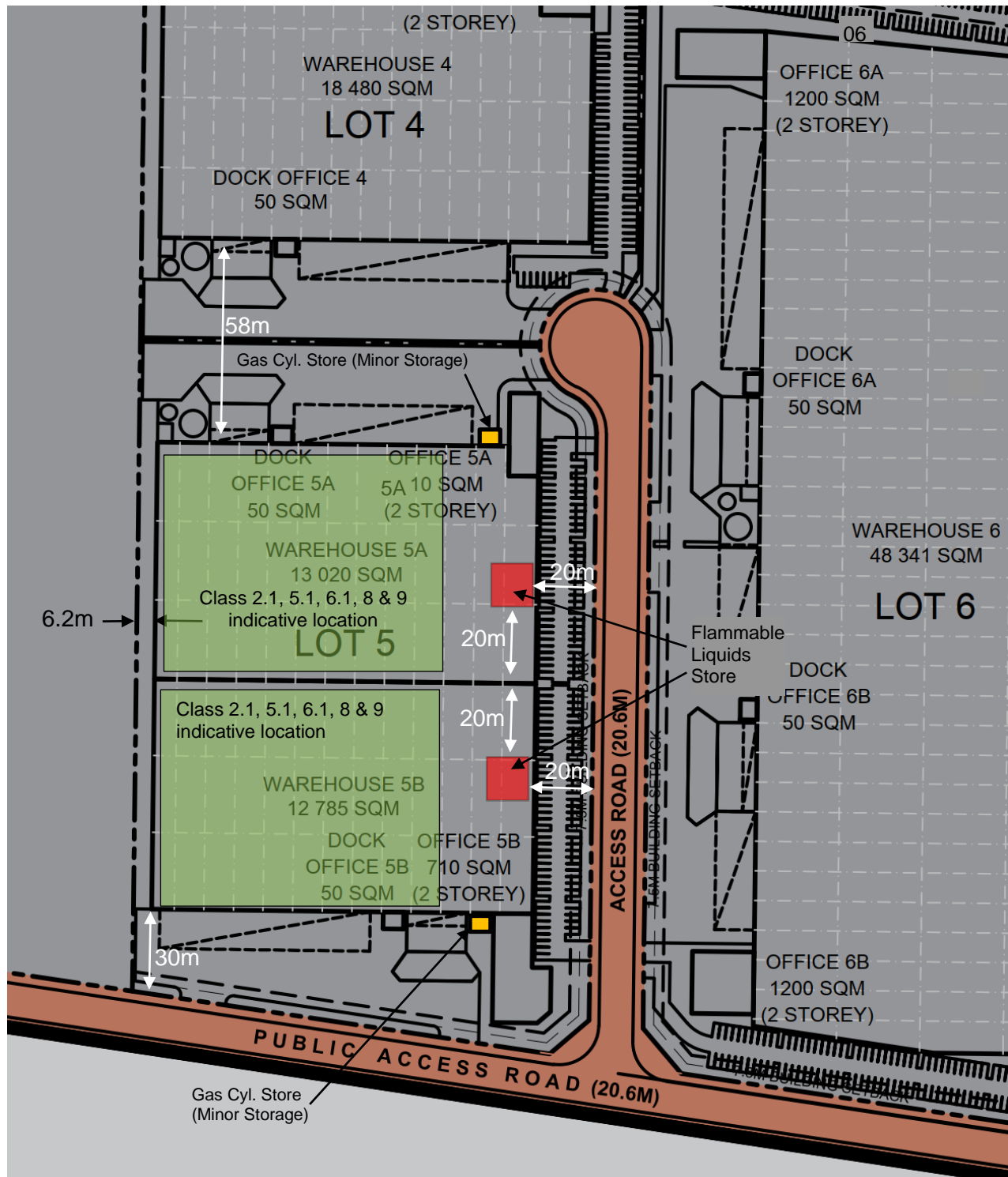
#### 4.3.1 SEPP33 Storage Assessment (Warehouses 5A & 5B)

**Figure 4.5** shows the layout of Warehouses 5A & 5B, including the location of DGs within the warehouses. The figure also shows the location of the warehouse in relation to the surrounding land uses, including separation distances between the warehouses and the boundaries.

The quantity of DGs that are proposed for storage in the warehouses is shown in **Table 4.5**. It is noted that Warehouse 5A & 5B are joined by a common wall separating each warehouse. Hence, due to the close proximity of the two facilities, the two warehouses are treated as a single facility for the purposes of the SEPP33 assessment. However, as the Class 3 flammable liquids will be held in an AS1940 compliant storage area at each site, these are treated individually, as the areas can be effectively separated in accordance with the SEPP33 (Ref.1) requirements.

Threshold limits for the application of SEPP 33 to Warehouses 5A & 5B are presented in **Table 4.5** along with maximum DG quantities that will be stored in the warehouses. **Figure 4.6** shows the maximum permissible quantity of flammable liquids that may be stored in each warehouse, as listed in SEPP33, based on the specific separation distances of the flammable liquids storages areas from the boundary (Ref.1).

**Table 4.5** shows that threshold quantities are not exceeded at Warehouses 5A & 5B and **Figure 4.6** shows that the maximum permissible storage quantities of flammable liquids is not exceeded, hence, SEPP 33 does not apply, as all DGs are under the screening threshold.



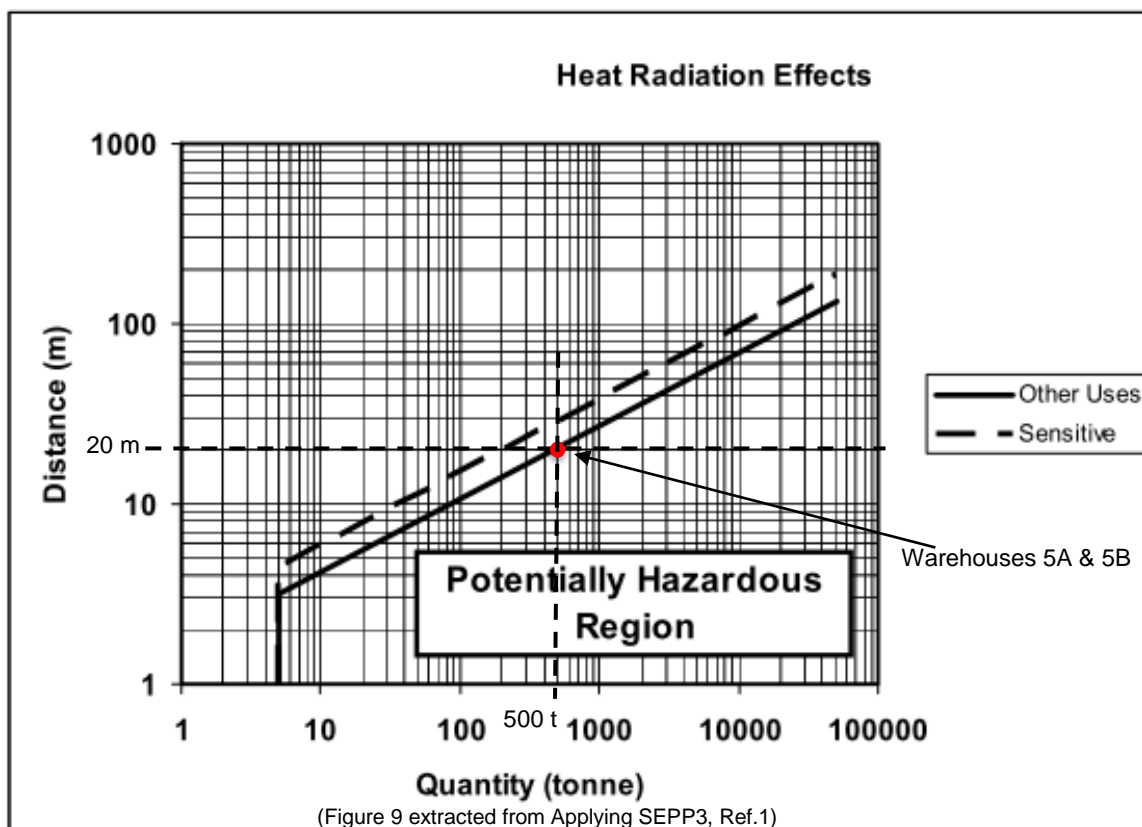
**Figure 4.5: Lot 5 - Warehouses 5A & 5B Layout showing DG Locations**

**Table 4.5: Quantities Stored in Warehouses 5A & 5B and SEPP33 Threshold Values for the Specific DGs Stored**

Class	Description	PG	Quantities Stored			SEPP 33 Threshold (Ref.1)	Does SEPP33 Apply?
			Warehouse 5A	Warehouse 5B	Total		
2.1	Aerosols	-	<3,500 kg (LPG)	<3,500 kg (LPG)	9,000 kg	10,000 kg	NO
	Cylinders	-	<1,000 kg (LPG)	<1,000 kg (LPG)			
3	Flammable Liquids	II & III	20,000 kg (PGII) 30,000 kg (PGIII)	-	50,000 kg	500,000 kg (500 tonnes)	NO (See Fig. 4.10 & Note 1 below)
3	Flammable Liquids	II & III	-	20,000 kg (PGII) 30,000 kg (PGIII)	50,000 kg	500,000 kg (500 tonnes)	NO (See Fig. 4.10 & Note 1 below)
4.1	Flammable Solids	II & III	2,000 kg	2,000 kg	4,000 kg	5,000 kg	NO
5.1	Oxidising Substances	II & III	2,000 kg	2,000 kg	4,000 kg	5,000 kg	NO
6.1	Toxic Substances	II & III	1,000 kg	1,000 kg	2,000 kg	2,500 kg	NO
8	Corrosives	II & III	12,000 kg	12,000 kg	24,000 kg	25,000 kg <sup>2</sup>	NO
9	Miscellaneous	II & III	20,000 kg	20,000 kg	40,000 kg	Not subject to SEPP33	
C1/C2	Combustible Liquids	-	20,000 kg	20,000 kg	40,000 kg	Not subject to SEPP33	

Notes: 1. The flammable liquids stores are located on the eastern side of Warehouse 5A and the eastern side of Warehouse 5B, with the closest boundary to the east of the store being 20m from the storage area bund. The distances to the other boundaries from the flammable liquids storage areas are greater than the distances to the north, south and west, hence, the boundaries are well separated from the storage and the facility is therefore not within the potentially hazardous region of Figure 9 of Applying SEPP33 (see **Figure 4.10**).

2. The threshold value for Class 8 products has been selected as the lower value of PG II & III, being 25,000 kg (noting that PG III corrosives can be stored up to a quantity of 50,000 kg).



**Figure 4.6: Class 3 PGII & III Flammable Liquids Storage - Warehouses 5A & 5B**

#### 4.3.2 SEPP33 Transport Assessment (Warehouses 5A & 5B)

It is necessary to assess the impact of transporting DGs on the surrounding arterial roads to and from Warehouses 5A & 5B. As the total quantities to be stored in both warehouses (cumulative) are below SEPP 33, it can be assumed that the frequency of movements would be low. Therefore, it is considered prudent to review the SEPP 33 transport criteria on the basis of minimum transport load listed in the guideline (Applying SEPP33, Ref.1). **Table 4.6** has been developed, based on the minimum load of goods, to compare the maximum storage quantity within the warehouses to conceptualise whether the loads would be likely to be exceeded based on the maximum storage quantities.

**Table 4.6: SEPP33 Transport Quantity vs Warehouse Storage Limits - Warehouses 5A & 5B**

Class	Minimum Load Quantity	Maximum Storage within Each Warehouse
2.1	4.5 tonnes	4 tonnes
3(II)	10 tonnes	50 tonnes
3(III)	No limits	50 tonnes
4.1	2 tonnes	2 tonnes
5.1	5 tonnes	2 tonnes
6.1	3 tonnes	1 tonnes
8	5 tonnes	12 tonnes
9	No Limit	20 tonnes
Combustible Liquid	No Limit	20 tonnes

Based on the maximum quantity to be stored in each of the warehouses (Warehouse 5A & 5B) 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 non-DG products, resulting in the majority of vehicles not carrying DGs. In addition, those movements where DGs are transported as a combined load (Non-DGs and DGs together), the majority of loads would be below the transport placard quantity, which does not exceed the maximum load quantities listed in **Table 4.6**.

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.

## 4.4 Lot 2 – Warehouse 2

### 4.4.1 SEPP33 Storage Assessment (Warehouse 2)

**Figure 4.7** shows the layout of Warehouse 2, including the location of DGs within the warehouse. The figure also shows the location of the warehouse in relation to the surrounding land uses, including separation distances between the warehouses and the boundaries.

Threshold limits for the application of SEPP 33 to Warehouse 2 are presented in **Table 4.7** along with maximum DG quantities that will be stored in the warehouses. **Figure 4.8** shows the maximum permissible quantity of flammable liquids that may be stored in each warehouse, as listed in SEPP33, based on the specific separation distances of the flammable liquids storage areas from the boundary (Ref.1).

**Table 4.7** shows that threshold quantities are not exceeded at Warehouse 2 and **Figure 4.8** shows that the maximum permissible storage quantities of flammable liquids is not exceeded, hence, SEPP 33 does not apply, as all DGs are under the screening threshold.

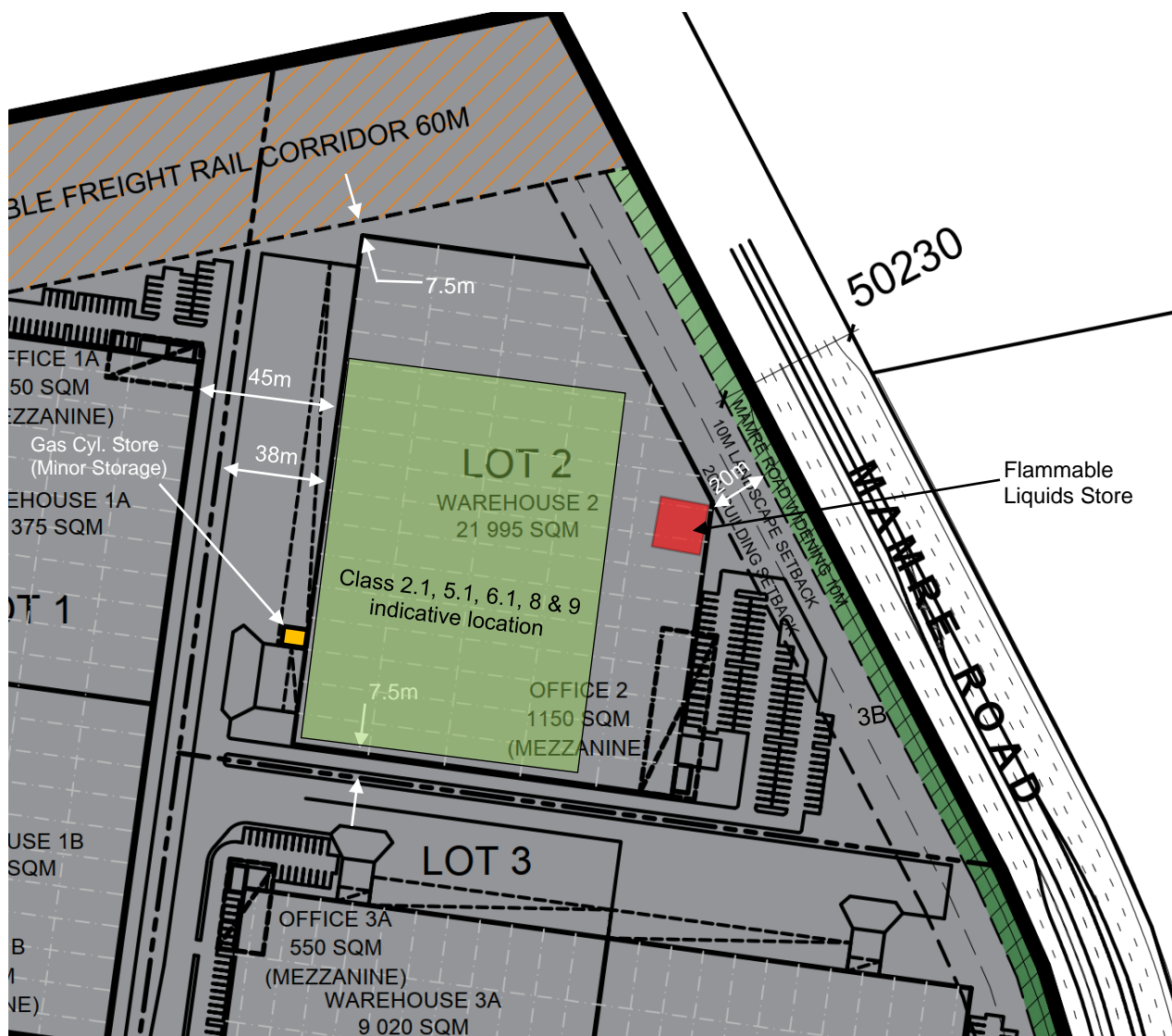


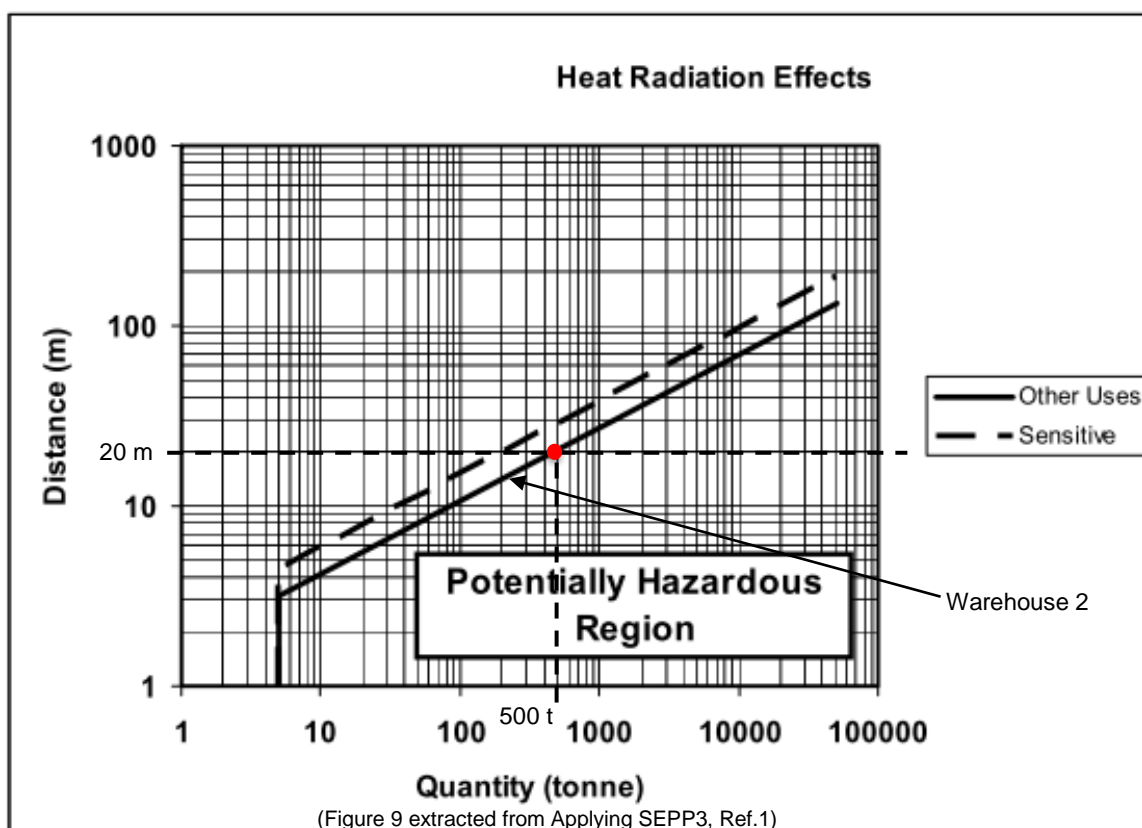
Figure 4.7: Lot 2 - Warehouse 2 Layout showing DG Locations

Table 4.7: Quantities Stored in Warehouse 2 and SEPP33 Threshold Values for Specific DGs Stored

Class	Description	PG	Quantities Stored	SEPP 33 Threshold (Ref.1)	Does SEPP33 Apply?
			Warehouse 2		
2.1	Aerosols	-	<7,000 kg (LPG)	10,000 kg	NO
	Cylinders	-	<1,000 kg (LPG)		
3	Flammable Liquids	II & III	20,000 kg (PGII) 30,000 kg (PGIII)	500,000 kg	NO (See Fig. 4.12 & Note 1 below)
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	20,000 kg	25,000 kg <sup>(Note 2)</sup>	NO
9	Miscellaneous	II & III	20,000 kg	Not subject to SEPP33	

Class	Description	PG	Quantities Stored	SEPP 33 Threshold (Ref.1)	Does SEPP33 Apply?
			Warehouse 2		
C1/C2	Combustible Liquids	-	20,000 kg	Not subject to SEPP33	

- Notes: 1. The flammable liquids store is located on the eastern side of Warehouse 2, with the closest boundary to the east being 20m to the west from the bund of the flammable liquids store. The distances to the other boundaries from the storage area is greater than the distances to the west, hence, the boundaries are well separated from the warehouse and the facility is therefore not within the potentially hazardous region of Figure 9 of Applying SEPP33 (see **Figure 4.12**).
2. The threshold value for Class 8 products has been selected as the lower value of PG II & III, being 25,000 kg (noting that PG III corrosives can be stored up to a quantity of 50,000 kg).



**Figure 4.8: Class 3 PGII & III Flammable Liquids Storage - Warehouse 2**

#### 4.4.2 SEPP33 Transport Assessment (Warehouse 2)

The assessment of the impact of transporting DGs on the surrounding arterial roads to and from Warehouses 2 is assessed in this section. As the total quantities to be stored in the warehouse are below SEPP 33, it can be assumed that the frequency of movements would be low. Therefore, it is considered prudent to review the SEPP 33 transport criteria on the basis of minimum transport load listed in the guideline (Applying SEPP33, Ref.1). **Table 4.8** has been developed based on the minimum load of goods to compare the maximum storage quantity within the warehouses to conceptualise whether the loads would be likely to be exceeded based on the maximum storage quantities.

**Table 4.8: SEPP33 Transport Quantity vs Warehouse Storage Limits - Warehouses 2**

Class	Minimum Load Quantity	Maximum Storage within Each Warehouse
2.1	4.5 tonnes	8 tonnes
3(II)	10 tonnes	20 tonnes
3(III)	No limits	30 tonnes
4.1	2 tonnes	4 tonnes
5.1	5 tonnes	4 tonnes
6.1	3 tonnes	2 tonnes
8	5 tonnes	20 tonnes
9	No Limit	20 tonnes
Combustible Liquid	No Limit	20 tonnes

Based on the maximum quantity to be stored in Warehouse 2, 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 non-DG products, resulting in the majority of vehicles not carrying DGs. In addition, those movements where DGs are transported as a combined load (Non-DGs and DGs together), the majority of loads would be below the transport placard quantity, which does not exceed the maximum load quantities listed in **Table 4.8**.

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.

## 4.5 Lot 1 – Warehouses 1A & 1B

### 4.5.1 SEPP33 Storage Assessment (Warehouses 1A & 1B)

**Figure 4.9** shows the layout of Warehouses 1A & 1B, including the location of DGs within the warehouses. The figure also shows the location of the warehouse in relation to the surrounding land uses, including separation distances between the warehouses and the boundaries.

The quantity of DGs that are proposed for storage in the warehouses is shown in **Table 4.9**. It is noted that Warehouse 1A & 1B are joined by a common wall separating each warehouse. Hence, due to the close proximity of the two facilities, the two warehouses are treated as a single facility for the purposes of the SEPP33 assessment. However, as the Class 3 flammable liquids will be held in an AS1940 compliant storage area at each site, these are treated individually, as the areas can be effectively separated in accordance with the SEPP33 (Ref.1) requirements.

Threshold limits for the application of SEPP 33 to Warehouses 1A & 1B are presented in **Table 4.9** along with maximum DG quantities that will be stored in the warehouses. **Figure 4.10** shows the maximum permissible quantity of flammable liquids that may be stored in each warehouse, as listed in SEPP33, based on the specific separation distances of the flammable liquids storages areas from the boundary (Ref.1).

**Table 4.9** shows that threshold quantities are not exceeded at Warehouses 1A & 1B and **Figure 4.10** shows that the maximum permissible storage quantities of flammable liquids is not exceeded, hence, SEPP 33 does not apply, as all DGs are under the screening threshold.

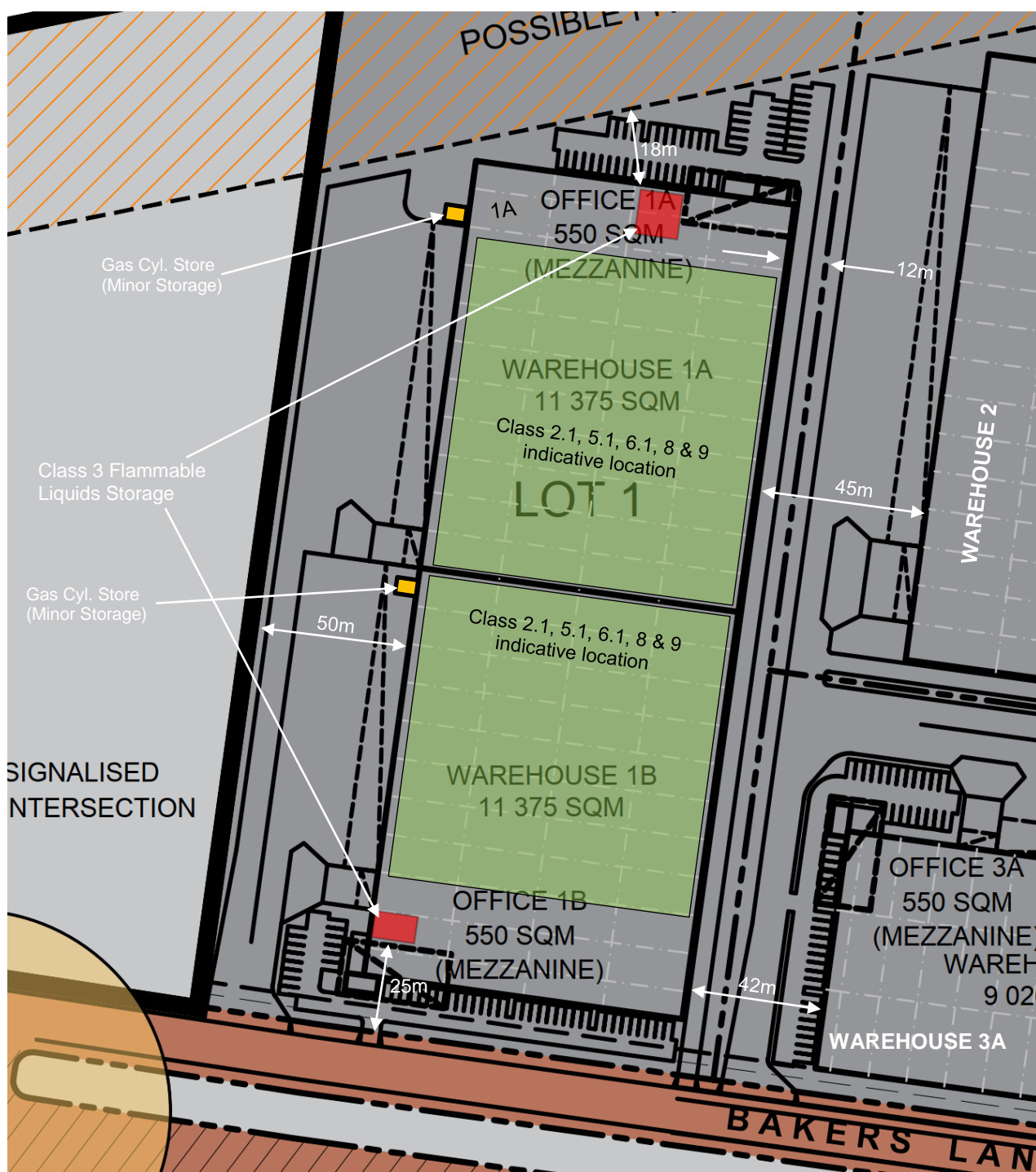


Figure 4.9: Lot 1 - Warehouses 1A & 1B Layout showing DG Locations

**Table 4.9: Quantities Stored in Warehouses 1A & 1B and SEPP33 Threshold Values for the Specific DGs Stored**

Class	Description	PG	Quantities Stored			SEPP 33 Threshold (Ref.[Hold])	Does SEPP33 Apply?
			Warehouse 1A	Warehouse 1B	Total		
2.1	Aerosols	-	<3,500 kg (LPG)	<3,500 kg (LPG)	9,000 kg	10,000 kg	NO
	Cylinders	-	<1,000 kg (LPG)	<1,000 kg (LPG)			
3	Flammable Liquids	II & III	20,000 kg (PGII) 30,000 kg (PGIII)	-	50,000 kg	380,000 kg (380 tonnes)	NO (See Fig. 4.12 & Note 1 below)
3	Flammable Liquids	II & III	-	20,000 kg (PGII) 30,000 kg (PGIII)	50,000 kg	700,000 kg (700 tonnes)	NO (See Fig. 4.12 & Note 1 below)
4.1	Flammable Solids	II & III	2,000 kg	2,000 kg	4,000 kg	5,000 kg	NO
5.1	Oxidising Substances	II & III	2,000 kg	2,000 kg	4,000 kg	5,000 kg	NO
6.1	Toxic Substances	II & III	1,000 kg	1,000 kg	2,000 kg	2,500 kg	NO
8	Corrosives	II & III	12,000 kg	12,000 kg	24,000 kg	25,000 kg <sup>(Note 2)</sup>	NO
9	Miscellaneous	II & III	20,000 kg	20,000 kg	40,000 kg	Not subject to SEPP33	
C1/C2	Combustible Liquids	-	20,000 kg	20,000 kg	40,000 kg	Not subject to SEPP33	

- Notes: 1. The flammable liquids stores are located on the north-eastern corner of Warehouse 1A and the south-eastern corner of Warehouse 1B, with the closest boundary to the east being 12.5m for Warehouse 1A and 1Bm from the bund of the flammable liquids stores. The distances to the other boundaries from the flammable liquids storage areas are greater than the distances to the east, hence, the boundaries are well separated from the storage and the facility is therefore not within the potentially hazardous region of Figure 9 of Applying SEPP33 (see **Figure 4.16**).
2. The threshold value for Class 8 products has been selected as the lower value of PG II & III, being 25,000 kg (noting that PG III corrosives can be stored up to a quantity of 50,000 kg).

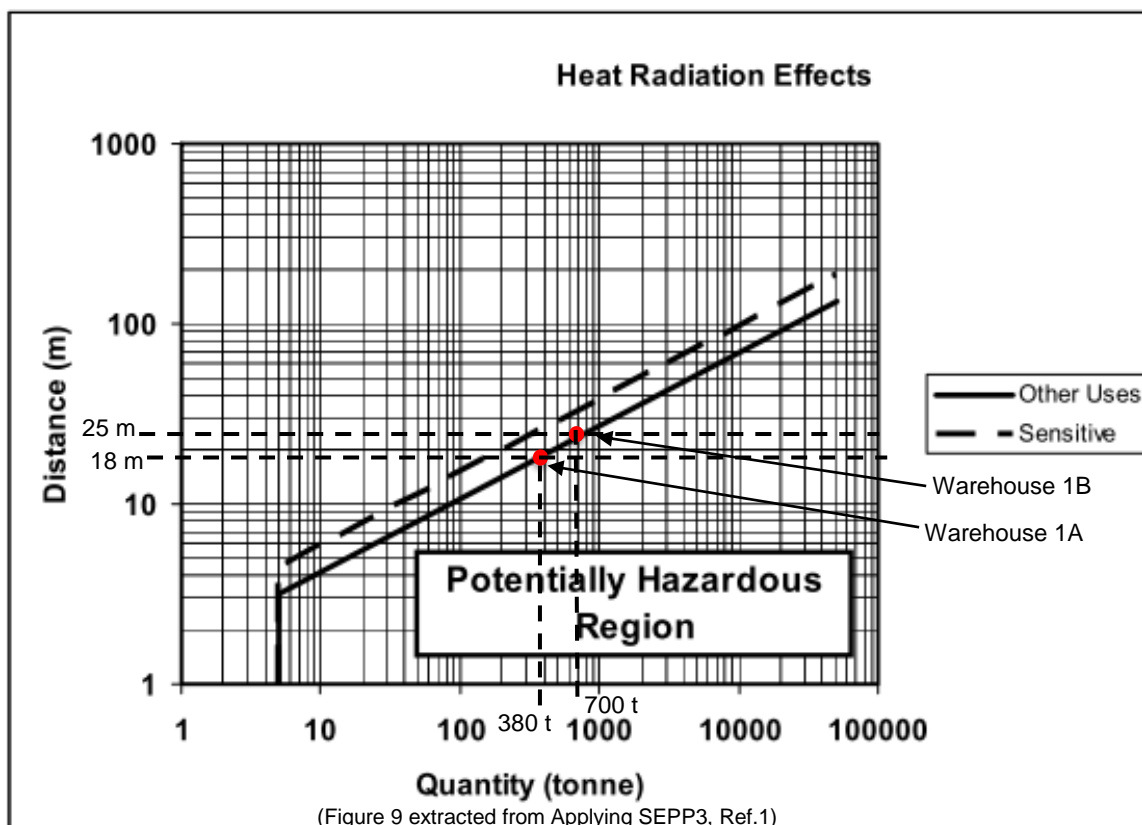


Figure 4.10: Class 3 PGII & III Flammable Liquids Storage - Warehouses 1A & 1B

#### 4.5.2 SEPP33 Transport Assessment (Warehouses 1A & 1B)

It is necessary to assess the impact of transporting DGs on the surrounding arterial roads to and from Warehouses 1A & 1B. As the total quantities to be stored in both warehouses (cumulative) are below SEPP 33, it can be assumed that the frequency of movements would be low. Therefore, it is considered prudent to review the SEPP 33 transport criteria on the basis of minimum transport load listed in the guideline (Applying SEPP33, Ref.1). **Table 4.10** has been developed, based on the minimum load of goods, to compare the maximum storage quantity within the warehouses to conceptualise whether the loads would be likely to be exceeded based on the maximum storage quantities.

Table 4.10: SEPP33 Transport Quantity vs Warehouse Storage Limits - Warehouses 1A & 1B

Class	Minimum Load Quantity	Maximum Storage within Each Warehouse
2.1	4.5 tonnes	4 tonnes
3(II)	10 tonnes	20 tonnes
3(III)	No limits	30 tonnes
4.1	2 tonnes	2 tonnes
5.1	5 tonnes	2 tonnes
6.1	3 tonnes	1 tonnes
8	5 tonnes	12 tonnes
9	No Limit	20 tonnes
Combustible Liquid	No Limit	20 tonnes

Based on the maximum quantity to be stored in each of the warehouses (Warehouse 1A & 1B) 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 non-DG products, resulting in the majority of vehicles not carrying DGs. In addition, those movements where DGs are transported as a combined load (Non-DGs and DGs together), the majority of loads would be below the transport placard quantity, which does not exceed the maximum load quantities listed in **Table 4.10**.

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.

## 4.6 Lot 3 – Warehouses 3A & 3B

### 4.6.1 SEPP33 Storage Assessment (Warehouses 3A & 3B)

**Figure 4.11** shows the layout of Warehouses 3A & 3B, including the location of DGs within the warehouses. The figure also shows the location of the warehouse in relation to the surrounding land uses, including separation distances between the warehouses and the boundaries.

The quantity of DGs that are proposed for storage in the warehouses is shown in **Table 4.11**. It is noted that Warehouse 3A & 3B are joined by a common wall separating each warehouse. Hence, due to the close proximity of the two facilities, the two warehouses are treated as a single facility for the purposes of the SEPP33 assessment. However, as the Class 3 flammable liquids will be held in an AS1940 compliant storage area at each site, these are treated individually, as the areas can be effectively separated in accordance with the SEPP33 (Ref.1) requirements.

Threshold limits for the application of SEPP 33 to Warehouses 3A & 3B are presented in **Table 4.11** along with maximum DG quantities that will be stored in the warehouses. **Figure 4.12** shows the maximum permissible quantity of flammable liquids that may be stored in each warehouse, as listed in SEPP33, based on the specific separation distances of the flammable liquids storages areas from the boundary (Ref.1).

**Table 4.11** shows that threshold quantities are not exceeded at Warehouses 3A & 3B and **Figure 4.12** shows that the maximum permissible storage quantities of flammable liquids is not exceeded, hence, SEPP 33 does not apply, as all DGs are under the screening threshold.

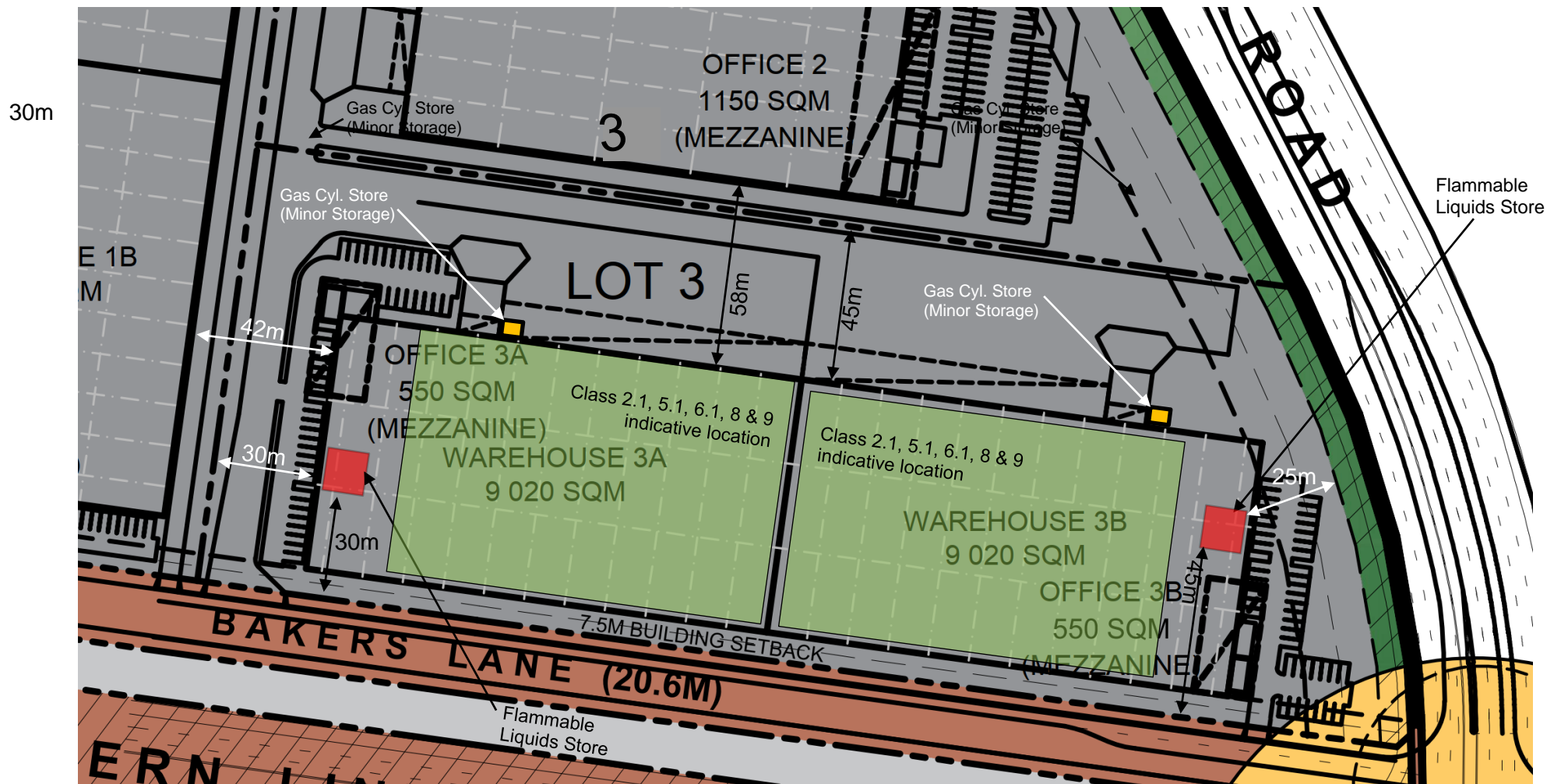
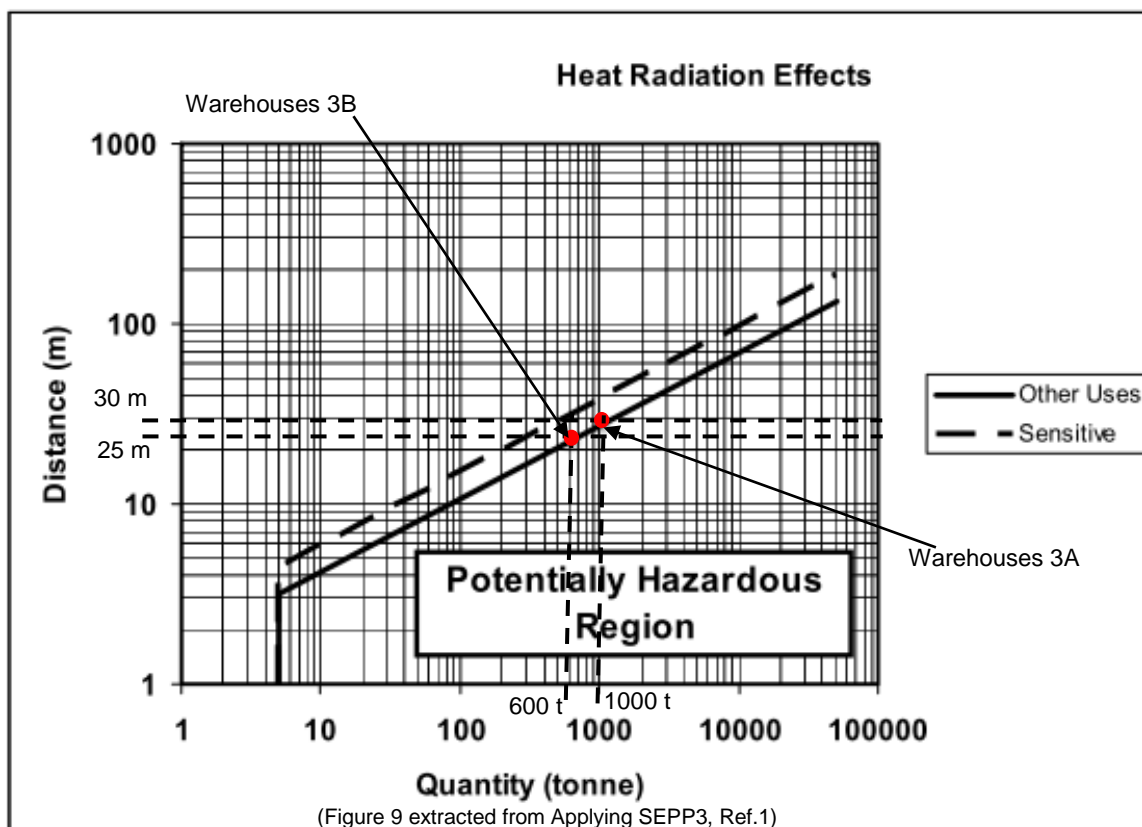


Figure 4.11: Lot 3 - Warehouses 3A & 3B Layout showing DG Locations

**Table 4.11: Quantities Stored in Warehouses 3A & 3B and SEPP33 Threshold Values for the Specific DGs Stored**

Class	Description	PG	Quantities Stored			SEPP 33 Threshold (Ref.1)	Does SEPP33 Apply?
			Warehouse 3A	Warehouse 3B	Total		
2.1	Aerosols	-	<3,500 kg (LPG)	<3,500 kg (LPG)	9,000 kg	10,000 kg	NO
	Cylinders	-	<1,000 kg (LPG)	<1,000 kg (LPG)			
3	Flammable Liquids	II & III	20,000 kg (PGII) 30,000 kg (PGIII)	-	50,000 kg	1,000,000 kg (1000 tonnes)	NO (See Fig. 4.10 & Note 1 below)
3	Flammable Liquids	II & III	-	20,000 kg (PGII) 30,000 kg (PGIII)	50,000 kg	600,000 kg (600 tonnes)	NO (See Fig. 4.10 & Note 1 below)
4.1	Flammable Solids	II & III	2,000 kg	2,000 kg	4,000 kg	5,000 kg	NO
5.1	Oxidising Substances	II & III	2,000 kg	2,000 kg	4,000 kg	5,000 kg	NO
6.1	Toxic Substances	II & III	1,000 kg	1,000 kg	2,000 kg	2,500 kg	NO
8	Corrosives	II & III	12,000 kg	12,000 kg	24,000 kg	25,000 kg <sup>2</sup>	NO
9	Miscellaneous	II & III	20,000 kg	20,000 kg	40,000 kg	Not subject to SEPP33	
C1/C2	Combustible Liquids	-	20,000 kg	20,000 kg	40,000 kg	Not subject to SEPP33	

- Notes: 1. The flammable liquids stores are located on the western side of Warehouse 3A and the eastern side of Warehouse 3B, with the closest boundary to the west being 30m for Warehouse 3A and 25m to the east for Warehouse 3B from the bund of the flammable liquids stores. The distances to the other boundaries from the flammable liquids storage areas are greater than the distances to the east and west, hence, the boundaries are well separated from the storage and the facility is therefore not within the potentially hazardous region of Figure 9 of Applying SEPP33 (see **Figure 4.10**).
2. The threshold value for Class 8 products has been selected as the lower value of PG II & III, being 25,000 kg (noting that PG III corrosives can be stored up to a quantity of 50,000 kg).



**Figure 4.12: Class 3 PGII & III Flammable Liquids Storage - Warehouses 3A & 3B**

#### 4.6.2 SEPP33 Transport Assessment (Warehouses 3A & 3B)

It is necessary to assess the impact of transporting DGs on the surrounding arterial roads to and from Warehouses 3A & 3B. As the total quantities to be stored in both warehouses (cumulative) are below SEPP 33, it can be assumed that the frequency of movements would be low. Therefore, it is considered prudent to review the SEPP 33 transport criteria on the basis of minimum transport load listed in the guideline (Applying SEPP33, Ref.1). **Table 4.12** has been developed, based on the minimum load of goods, to compare the maximum storage quantity within the warehouses to conceptualise whether the loads would be likely to be exceeded based on the maximum storage quantities.

**Table 4.12: SEPP33 Transport Quantity vs Warehouse Storage Limits - Warehouses 3A & 3B**

Class	Minimum Load Quantity	Maximum Storage within Each Warehouse
2.1	4.5 tonnes	4 tonnes
3(II)	10 tonnes	20 tonnes
3(III)	No limits	30 tonnes
4.1	2 tonnes	2 tonnes
5.1	5 tonnes	2 tonnes
6.1	3 tonnes	1 tonnes
8	5 tonnes	12 tonnes
9	No Limit	20 tonnes
Combustible Liquid	No Limit	20 tonnes

Based on the maximum quantity to be stored in each of the warehouses (Warehouse 3A & 3B) 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 non-DG products, resulting in the majority of vehicles not carrying DGs. In addition, those movements where DGs are transported as a combined load (Non-DGs and DGs together), the majority of loads would be below the transport placard quantity, which does not exceed the maximum load quantities listed in **Table 4.12**.

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.

#### 4.7 Cumulative Impact Potential

Where quantities of DGs are stored and handled below SEPP33 threshold levels, within each of the tenancies, there is a potential for a cumulative effect of DG storage across the whole site reach a point whereby an incident involving DGs at one site may impact an adjacent site resulting in a “domino” effect and incident growth from site to site.

At this stage of the development process, the quantity of DG in each warehouse is unknown as the tenants are currently unknown. As the tenants are unknown, the approach has been to assume that each tenant will store DGs within the maximum permissible threshold level listed in “Applying SEPP 33” (DPE). This is a conservative approach as not all tenancies will hold DGs and many of those that do, will not reach anywhere near SEPP 33 threshold values. As noted in the guideline to SEPP 33, quantities of DGs below the maximum permissible thresholds are considered to result in minimal off-site impacts, hence, using this approach, each individual tenancy will maintain the quantities of DGs at levels that will minimise the likelihood of offsite impact and therefore cumulative risks are minimised (i.e. “domino” effects are minimal).

It is also noted at this stage of the development, the preliminary assessment has identified that all warehouses are below SEPP33 threshold levels, however, it is noted that each site will require its own DA process, where DGs are stored. This will involve the submission of a separate SEPP33 review to confirm the DG quantities have not changed since the initial assessment. In the event any changes in storage quantities occur, these will be reviewed as part of the individual DA submission. Where quantities of DGs stored exceed SEPP33 thresholds, a Preliminary Hazard Analysis (PHA) study will be performed and submitted with the DA. The PHA will include a cumulative assessment and impacts on adjacent sites (if any).

In summary, as long as SEPP33 thresholds are not exceeded at the individual warehouses, the cumulative effects are minimised, however, where SEPP33 thresholds are exceeded, a PHA will be performed, including potential incident growth and impact to adjacent facilities (including cumulative impacts).

## 5 CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Conclusions

An analysis of the application of State Environmental Planning Policy No.33, Hazardous and Offensive Developments (SEPP33) was conducted for the proposed Frasers-Altis development on Mamre Road, Kemps Creek, NSW. The proposed development involves the construction of 9 warehouses on a parcel of land located to the west of Mamre Road, Kemps Creek. The analysis was conducted based on a limited quantity of Dangerous Goods (DGs) stored and handled at each warehouse, noting that the development has considered the potential for warehouse tenants to store and handle limited DGs as part of their operations.

The analysis identified that the quantity of DGs held at each warehouse did not exceed the storage threshold levels listed in “Applying SEPP33”(Ref.1). It was also identified that the relatively low quantity of DGs stored and handled, and the type of operations proposed at the warehouses (i.e. warehouses are not dedicated DG storage facilities), it was unlikely to result in exceeding the maximum permissible transport quantity and number of vehicle operation listed in “Applying SEPP33”(Ref.1). Hence, based on the assessment conducted in this study, it is concluded that SEPP33 does not apply to the proposed development.

Based on the assessment conducted in this study, and the results indicating that SEPP33 does not apply to any of the warehouses within the development, it is concluded that the requirements of the Hazard and Risk Section of the SEARs (Key Issues, Dot point 9) have been addressed.

### 5.2 Recommendations

Notwithstanding the conclusion reached above, it is noted that tenants may require to store DGs at quantities exceeding those assessed in this study. Should a tenant require to store and handle additional DGs to those listed for the specific warehouse in this study, it is recommended that a review of the application of SEPP33 should be conducted and where required a Preliminary Hazard Analysis (PHA) study be performed should it be identified that SEPP33 applies to the specific warehouse.

## 6 REFERENCES

1. Applying SEPP 33 (2011), "Hazardous and Offensive Development Application Guidelines", NSW Department of Planning and Infrastructure.
2. "The Australian Code for the Transport of Dangerous Goods by Road and Rail", known as The Australian Dangerous Goods Code or ADG, ed. 7.3, 2015, Federal Office of Road Safety, Canberra, ACT

## Appendix A

### DATA EXTRACTED FROM "APPLYING SEPP33"

## A1 SCREENING METHODS

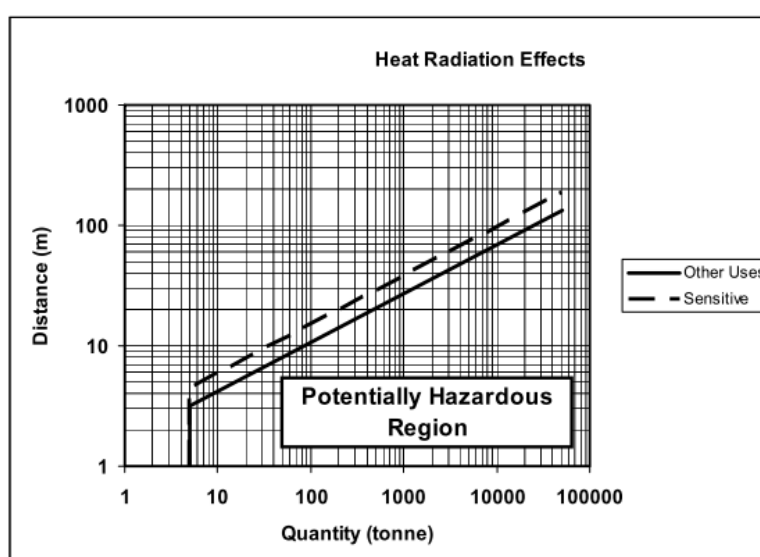
**Figure A.1**, extracted from “Applying SEPP33” provides details on the application of Figures or Tables from the same document to determine the applied screening Threshold. It shows that:

- for LPG, Table 3 shall be used;
- for Class 3 PG II and III, Figure 9 shall be used (note: Class 3 PGI 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;
- Combustible Liquids 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 A.1: Screening Method to be Used**

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



**Figure A.2: Class 3 PGII and PGIII Flammable Liquids**

**Table 3: General Screening Threshold Quantities**

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 <sup>1</sup> )	
	10 tonne or 16 m <sup>3</sup>	if stored above ground
	40 tonne or 64 m <sup>3</sup>	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 A.3: General Screening Threshold Quantities**

Product will be transported to and from the warehouses/industrial facility; 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 A.4**.

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 A.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.

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