Riskcon engineering

State Environmental Planning Policy - Resilience & Hazards

89 Victoria Street, Smithfield

Fernway Engineering Pty Ltd
Document No. RCE-24289_DNR_SEPP_Final_05Sep24_Rev(0)
Date 5/09/2024

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89 Victoria Street, Smithfield

Fernway Engineering Pty Ltd

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Rev	Date	Remarks	Prepared By	Reviewed By
A	03 September 2024	Draft issued for review	Ezra Bagaskara	Renton Parker
0	05 September 2024	Final issued		

Executive Summary

Introduction

Fernway Engineering Pty Ltd (Fernway) is assisting their client D&N Rubber Refinery Pty Ltd (D&N) with a new facility for the recycling of rubber at a site in 68 Victoria Street, Smithfield. The Council has requested that a Preliminary Hazard Analysis (PHA) be prepared for the site to assess the risks of the proposed development on the surrounding land uses. It is noted that the information provided by D&N would not exceed the thresholds in Chapter 3 of the State Environmental Planning Policy – Resilience & Hazards (SEPP-RH); hence, normally only a screening assessment would be required as part of the application. Nonetheless, to be conservative, Fernway has requested a proposal to prepare the SEPP-RH screening assessment and the PHA depending on the outcome of discussions with the Council.

Fernway, on behalf of D&N, has engaged Riskcon Engineering Pty Ltd (Riskcon) to prepare the SEPP-RH assessment for the site at 68 Victoria Street, Smithfield NSW. This document represents the assessment prepared for the site.

Conclusions

A review of the quantities of DGs proposed to be stored at 68 Victoria Street, Smithfield and the associated vehicle movements was conducted and compared to the threshold quantities outlined in Applying SEPP 33 (Ref. [1]). The results of this analysis indicates the threshold quantities for the DGs to be stored and transported are not exceeded; hence, SEPP-RH 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 facilty as SEPP-RH 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 1596:2014, AS 1940:2017, etc.).
- The documentation required by the Work Health and Safety (WHS) Regulation 2017 (Ref. [2]) shall be prepared to demonstrate the risks have been assessed and minimised So Far As Is Reasonably Practicable (SFAIRP) as required by the WHS Regulations.

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1.0 Introduction

1.1 Background

Fernway Engineering Pty Ltd (Fernway) is assisting their client D&N Rubber Refinery Pty Ltd (D&N) with a new facility for the recycling of rubber at a site in 68 Victoria Street, Smithfield. The Council has requested that a Preliminary Hazard Analysis (PHA) be prepared for the site to assess the risks of the proposed development on the surrounding land uses. It is noted that the information provided by D&N would not exceed the thresholds in Chapter 3 of the State Environmental Planning Policy – Resilience & Hazards (SEPP-RH); hence, normally only a screening assessment would be required as part of the application. Nonetheless, to be conservative, Fernway has requested a proposal to prepare the SEPP-RH screening assessment and the PHA depending on the outcome of discussions with the Council.

Fernway, on behalf of D&N, has engaged Riskcon Engineering Pty Ltd (Riskcon) to prepare the SEPP-RH assessment for the site at 68 Victoria Street, Smithfield NSW. This document represents the assessment prepared for the site.

1.2 Scope of Work

The scope of work is to prepare a SEPP-RH assessment for the facility located at 68 Victoria Street, Smithfield NSW. 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-RH.
- 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-RH 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. **Figure 2-2** indicates the SEPP-RH general screening thresholds for DG storage (Table 3 from the document) and **Figure 2-3** indicates the SEPP 33 general screening thresholds for vehicular movements (Table 2 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 or16 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

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

Figure 2-3: Transportation Screening Thresholds

3.0 General Description

3.1 Site Location and Layout

The proposed facility is located at 68 Victoria Street, Smithfield NSW which is 25 km west of the Sydney Central Business District (CBD). **Figure 3-1** shows the location of the site.

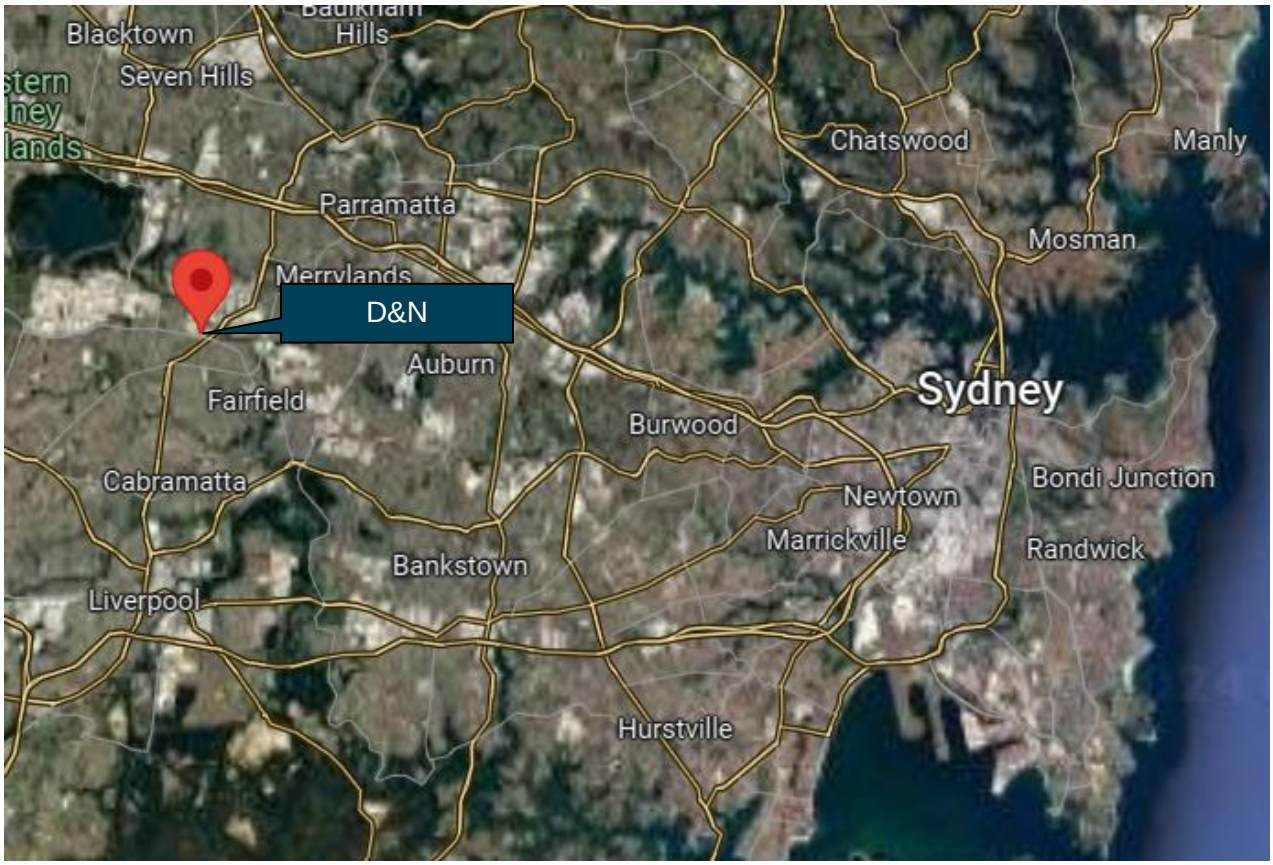

Figure 3-1: Site Location (source Google Maps)

3.2 General Description

The site is mainly used for the repurposing of waste tyres. These are cut or shred with a shredder unit and then taken to a grinding machine to produce fine crumb rubber. Residue steel is separated from the tyres through a magnetic process.

3.3 Quantities of Dangerous Goods Stored and Handled

Provided in **Table 3-1** is a summary of the classes and quantities of DGs proposed to be stored and handled at the site. Note that although these are non-DGs, crumb rubber made from shredded or cut tyres are stored on-site.

Table 3-1: Classes and Quantities of Dangerous Goods Stored and Handled

Class	PG	Quantity (kg or L)
C1	n/a	400 L
2.1	n/a	90 kg or 164 L^

^LPG is assumed to be 0.550 kg/L.

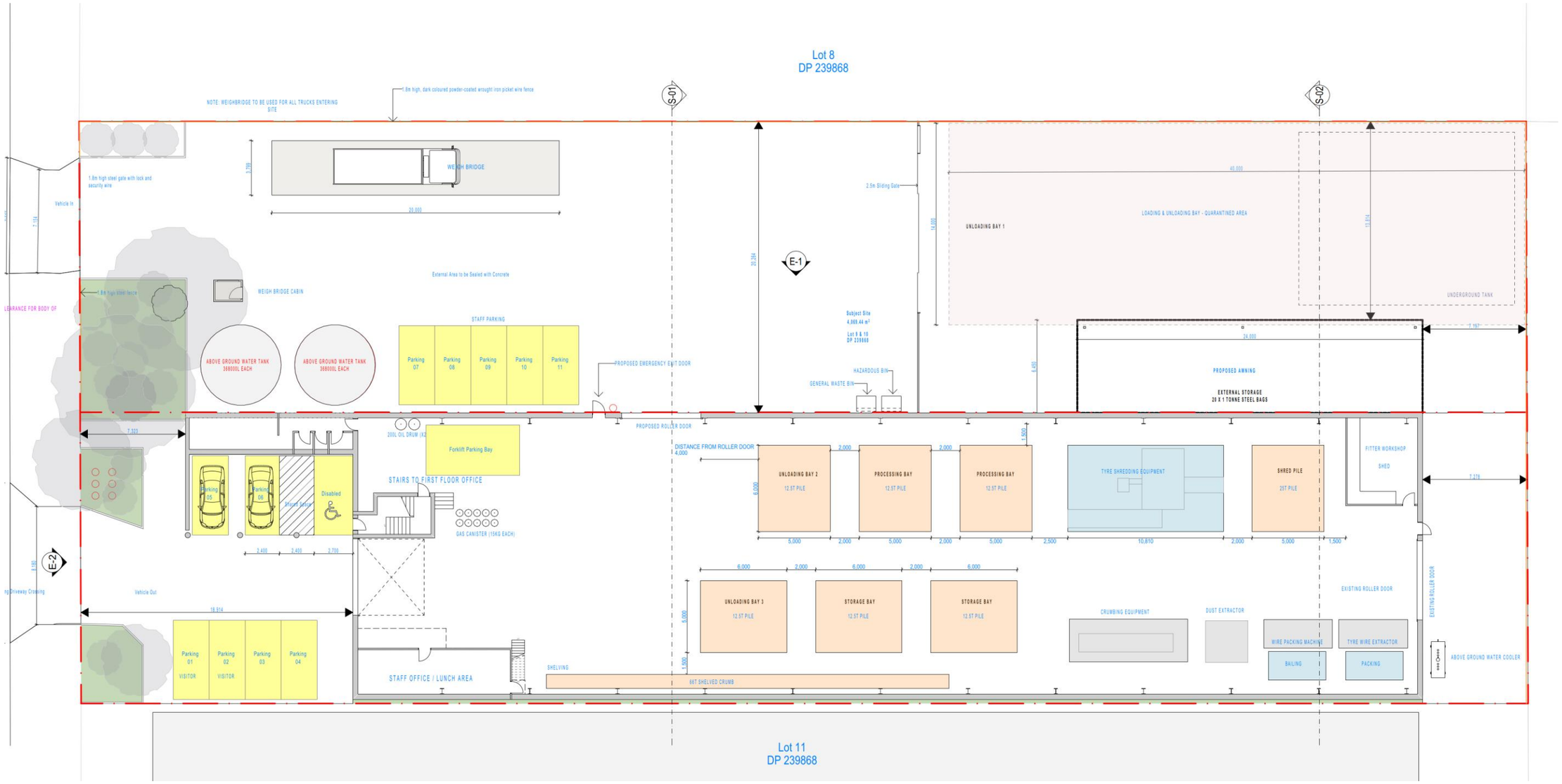

Figure 3-2: Site Layout

4.0 SEPP-RH Review

4.1 Proposed Storage Details

The maximum quantities of products and DGs that are to be stored at the facility, are shown in **Table 4-1**. The data has been given by Fernway. Provided in **Table 4-1** is an assessment of whether the Class is subject to the SEPP.

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

Class	Description	PG	Quantity (L)	Class Subject to SEPP-RH (Y/N)
C1	Gear oil and grease	n/a	400	N
2.1	LPG cylinders	n/a	164	Y

4.2 Assessment of Hazards

4.2.1 Storage

Threshold limits for the application of SEPP-RH are presented in **Table 4-2** along with maximum DG quantities that will be stored at the site. The results summarised in the table indicates the SEPP-RH criteria is not exceeded; hence, no further assessment would be required.

Table 4-2: Quantities Stored and SEPP 33 Threshold

Class	Description	PG	Quantity (L)	SEPP Threshold (L)	Does SEPP 33 (Y/N)
2.1	LPG cylinders	n/a	164	16,000	N

4.2.2 Non-DG Processing

The site converts used tyres to crumb rubber via a shredding or cutting process, and a machine grinder. These are then used for asphalt in roads, floor tile glue and/or playgrounds. The processes that are utilised to produce the crumb rubber do not involve the use of DGs. Note that the final product itself is a non-DG as described in its Safety Data Sheet (SDS).

It is known that tyres are combustible; however, they require a large amount of sustained heating to get them to ignite. The site's process narrative indicates that no ignition/heating of goods are required to produce crumb rubber, and no flammable goods are held which greatly limits the potential for a sustained fire; hence, there is a low risk of fire. Therefore, the potential impacts on the surrounding land uses from the manufacturing process are considered low.

The above discussion substantiates that Chapter 3 of the SEPP-RH does not apply as the potential for offsite impact is negligible.

4.2.3 Transport

Provided in **Table 4-3** is a summary of the transport movements for each DG class and an assessment of whether that number of movements is credible for this site to exceed or not. Based upon the assessment, it is unlikely that there would be sufficient movements of vehicles to and from the site to exceed the transport limits as this would imply an incredibly high turnover of stock which is unlikely to be achieved. Therefore, the SEPP-RH does not apply based on transport.

Table 4-3: Transport Movements Assessment

Class	Description	PG	Truck Movements		Assessment
			Annual	Weekly	
2.1	Flammable Liquids	II & III	>750	>45	The site uses low volumes of liquids which would not exceed the minimum package limit to be considered for transport assessment

4.3 Assessment of Offense

Applying SEPP 33 also contains a requirement for review of operations that may cause offense in the form of odour, environmental impact, nuisance (noise), etc. An indication of whether "offensiveness" may occur at the facility is whether an Environmental Protection Authority (EPA) licence is required for specific operations at the site (Ref. [3] and [4]).

A review of the facilities operations indicates that there are no processes that would result in the manufacture, production, or transfer of materials in a form that may result in the release of bulk materials at the site or that could result in odour generation. Furthermore, given the production scale, it is highly unlikely that excessive noise from the site will be an issue. As such, an EPA licence would not be required for this site.

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

In summary, there is no potential for "offensive" operations at the site or noise that has been assessed as part of the estate DA and therefore SEPP 33 does not apply in this case.

5.0 Conclusion and Recommendations

5.1 Conclusions

A review of the quantities of DGs proposed to be stored at 68 Victoria Street, Smithfield and the associated vehicle movements was conducted and compared to the threshold quantities outlined in Applying SEPP 33 (Ref. [1]). The results of this analysis indicates the threshold quantities for the DGs to be stored and transported are not exceeded; hence, SEPP-RH 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 facilty as SEPP-RH does not apply.

5.2 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 1596:2014, AS 1940:2017, etc.).
- The documentation required by the Work Health and Safety (WHS) Regulation 2017 (Ref. [2]) shall be prepared to demonstrate the risks have been assessed and minimised So Far As Is Reasonably Practicable (SFAIRP) as required by the WHS Regulations.

6.0 References

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

[2] SafeWork NSW, “Work Health and Safety Regulation,” SafeWork NSW, Lisarow, 2017.

[3] “Protection of the Environment Operations (General) Regulation,” 2009.

[4] “Protection of the Environment Operations Act,” 1997.