



State Environmental Planning Policy (Resilience and Hazards)
2021 Preliminary Risk Screening

40 Madeline St, Strathfield South NSW 2136

State Environmental Planning Policy (Resilience and Hazards) 2021 Preliminary Risk Screening

40 Madeline St, Strathfield South NSW 2136

EME Advisory Pty Ltd

Prepared by

Riskcon Engineering Pty Ltd

37 Pogson Drive

Cherrybrook NSW 2126

www.riskcon-eng.com

ABN 74 626 753 820

© Riskcon Engineering Pty Ltd. All rights reserved.

This report has been prepared in accordance with the scope of services described in the contract or agreement between Riskcon Engineering Pty Ltd and the Client. The report relies upon data, surveys, measurements and results taken at or under the particular times and conditions specified herein. Changes to circumstances or facts after certain information or material has been submitted may impact on the accuracy, completeness or currency of the information or material. This report has been prepared solely for use by the Client. Riskcon Engineering Pty Ltd accepts no responsibility for its use by other parties without the specific authorization of Riskcon Engineering Pty Ltd. Riskcon Engineering Pty Ltd reserves the right to alter, amend, discontinue, vary or otherwise change any information, material or service at any time without subsequent notification. All access to, or use of, the information or material is at the user's risk and Riskcon Engineering Pty Ltd accepts no responsibility for the results of any actions taken on the basis of information or material provided, nor for its accuracy, completeness or currency.

Quality Management

Rev	Date	Remarks	Prepared By	Reviewed By
A	15 th October 2023	Draft issue for comment	Isaac Gates	Renton Parker
0	21 st November 2023	Final issued		
1	25 nd June 2026	DPHI – mixed waste update		

Executive Summary

Background

EME Advisory Pty Ltd (EME Advisory) has been engaged to prepare an Environmental Impact Statement (EIS) to accompany a State significant development application (SSDA) for an increase in the mixed waste processing capacity at the Strathfield South Materials Recovery Facility (MRF) Located at 40 Madeline Street, Strathfield South, NSW. The Secretary's Environmental Assessment Requirements (SEARs) requires the preparation of a preliminary risk screening, completed in accordance with NSW State Environmental Planning Policy (Resilience and Hazards) 2021 (SEPP-RH) and the document Applying SEPP 33: Hazardous and Offensive Development Application Guidelines (NSW Department of Planning, 2011) (Applying SEPP 33).

EME Advisory, on behalf of Polytrade Operations Pty Ltd (Polytrade), has commissioned Riskcon Engineering Pty Ltd (Riskcon) to prepare this SEPP-RH assessment for the facility to investigate how the facility's increased processing capacity may affect relevant thresholds set out in chapter 3 of SEPP-RH.

Conclusions

A review of the quantities of DGs to be stored at the facility and associated vehicle movements was conducted and compared to the threshold quantities set out in "Applying SEPP 33". The results of this analysis indicate the threshold quantities for the DGs to be stored and transported will not be exceeded, hence, Chapter 3 of SEPP-RH does not apply to the project.

As the facility is not classified as potentially hazardous or offensive, it is not necessary to prepare a PHA for the facility, as Chapter 3 of SEPP-RH does not apply.

Recommendations

No recommendations have been made as a result of this assessment.

Table of Contents

Executive Summary	i
1.0 Introduction	1
1.1 Background	1
1.2 Scope of Work	1
1.3 Qualifications of the Assessor	1
2.0 Methodology	2
2.1 General Methodology	2
2.2 Data taken from “Applying SEPP 33”	2
3.0 Project Description	5
3.1 Site Location and Layout	5
3.2 General Description	5
3.3 Quantities of Dangerous Goods	7
4.0 SEPP-RH Review	9
4.1 Application of Chapter 3 of State Environmental Planning Policy (Resilience and Hazards) 2021	9
4.2 Proposed Storage Details	9
4.3 Assessment of Hazards	9
4.3.1 Storage of Glass	9
4.3.2 Storage of waste	10
4.3.3 Transport	10
5.0 Conclusion and Recommendations	11
5.1 Conclusions	11
5.2 Recommendations	11
6.0 References	12

List of Figures

Figure 2-1: Screening Method to be Used	2
Figure 2-2: General Screening Threshold Quantities	3
Figure 2-3: Transportation Screening Thresholds	4
Figure 3-1: Site Location (source Google Maps)	5
Figure 3-2: Site Layout	8

List of Tables

Table 3-1: Classes and Quantities of DGs Stored and Handled	7
Table 4-1: DG Classes or Materials Stored and Maximum Quantities	9

Abbreviations

Abbreviation	Description
CBD	Central Business District
DA	Development Application
DGs	Dangerous Goods
DPE	NSW Department of Planning and Environment
EIS	Environmental Impact Statement
GBP	Glass Beneficiation Plant
LPG	Liquefied Petroleum Gas
MRF	Materials Recovery Facility
PHA	Preliminary Hazard Analysis
POEO act	Protection of the Environment Operations Act 1997
RH	Resilience and Hazards
SEARs	Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy
SSDA	State Significant Development Application

1.0 Introduction

1.1 Background

EME Advisory Pty Ltd (EME Advisory) has been engaged to prepare an Environmental Impact Statement (EIS) to accompany a State significant development application (SSDA) for an increase in the mixed waste processing capacity at the Strathfield South Materials Recovery Facility (MRF) Located at 40 Madeline Street, Strathfield South, NSW. The Secretary's Environmental Assessment Requirements (SEARs) requires the preparation of a preliminary risk screening, completed in accordance with NSW State Environmental Planning Policy (Resilience and Hazards) 2021 (SEPP-RH) and the document Applying SEPP 33: Hazardous and Offensive Development Application Guidelines (NSW Department of Planning, 2011) (Applying SEPP 33).

EME Advisory, on behalf of Polytrade Operations Pty Ltd (Polytrade), has commissioned Riskcon Engineering Pty Ltd (Riskcon) to prepare this SEPP-RH assessment for the facility to investigate how the facility's increased processing capacity may affect relevant thresholds set out in chapter 3 of SEPP-RH.

1.2 Scope of Work

The scope of work is to prepare a SEPP-RH assessment for the facility located at 40 Madeline St, Strathfield South. The assessment does not include any other sites, or the preparation of any additional planning studies should they be required.

1.3 Qualifications of the Assessor

The assessment will be performed by Isaac Gates who is a Risk Engineer at Riskcon Engineering Pty Ltd. Isaac is a graduate engineer with experience working in the field of industrial plants and risk engineering, dealing specifically with Dangerous Goods (DGs) consulting. Isaac is enhancing his profile with expertise in risk, DGs, and fire assessments for industrial facilities storing DGs and other materials with unique hazards ranging from minor storage below threshold assessments up to Major Hazard Facilities.

The assessment has been reviewed for quality and accuracy by Renton Parker, the Managing Director at Riskcon. Renton has performed numerous risk, DGs, and fire assessments for industrial facilities storing DGs and other materials with unique hazards ranging from minor storage (below SEPP-RH thresholds) up to Major Hazard Facilities.

2.0 Methodology

2.1 General Methodology

The methodology used in this assessment is as follows:

- Review the types and proposed quantities of DGs to be stored at the site.
- Compare the quantities of DGs with the threshold quantities listed in “Applying SEPP 33” 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.

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

Figure 2-1: Screening Method to be Used

Table 3 from “Applying SEPP 33” indicates the SEPP-RH general screening thresholds for DG storage reproduced in **Figure 2-2**.

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

Figure 2-2: General Screening Threshold Quantities

Figure 2-3 indicates the SEPP 33 general screening thresholds for vehicular movements (Table 2 from the document).

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

Figure 2-3: Transportation Screening Thresholds

3.0 Project Description

3.1 Site Location and Layout

The proposed facility is located 40 Madeline St, Strathfield South which is located 16 km southwest of the Sydney Central Business District (CBD). **Figure 3-1** shows the regional location of the site in relation to Sydney.

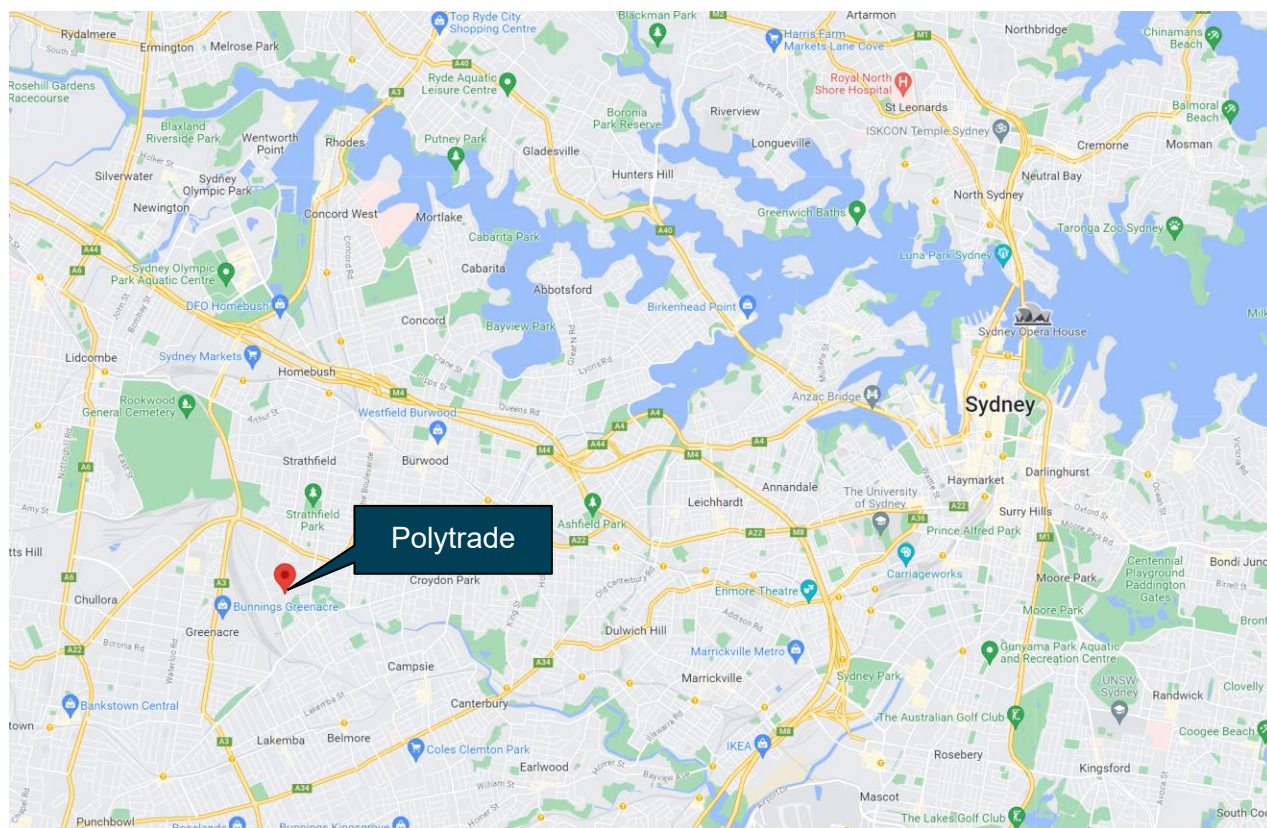


Figure 3-1: Site Location (source Google Maps)

3.2 General Description

The Strathfield South Material Recovery Facility (MRF) currently processes four recyclable waste streams; mixed metals, glass, mixed plastics and paper/cardboard. The facility has an approved throughput of 30,000 tonnes per annum (tpa) of paper and cardboard and 69,900 tpa of mixed metals, glass and mixed plastics. Polytrade is seeking approval to increase glass processing (referred to as glass beneficiation) capacity at the existing MRF. Glass processed is sourced from recovered mixed waste as well as the delivery of source-separated glass; an increase in glass throughput also involves a corresponding increase in mixed waste throughput. Polytrade is therefore seeking approval to increase the throughput of mixed waste, inclusive of glass, by 100,100 tpa to meet the demand for increased glass throughput. Condition L2.4 of EPL 20576 limits the amount of waste materials permitted on the premises at any one time to 4,200 T. Polytrade will be seeking a variation to condition L2.4 to increase the amount of waste permitted on the premises at any one time to 8,000 T. This undertaking will involve an increase in the onsite storage of glass, the operational hours of the facility and traffic movements associated with transporting the additional glass and employment of six additional staff.

The glass beneficiation process involves four steps; glass receipt, cleaning, processing/sorting and off take. Vehicles carrying comingled recyclables enter the site from Madeline Street and, are weighed, before unloading the materials in the MRF retrieval area. The MRF sorts materials,

including plastics, paper/cardboard, steel, aluminium, and glass. Non-recyclables are removed. Once separated, plastics, metals and paper/cardboard are baled and temporarily stored before being sent to other facilities for further reprocessing.

Glass outputs from the MRF are transferred to the glass beneficiation plant (GBP) in Building 1 for further processing and colour separation. Glass from single-stream collections is also processed in the same facility and is sent directly to the GBP. On entering the GBP, the glass undergoes a cleaning process to remove lids, labels, and contaminants, using optical equipment to remove plastic and paper, an X-ray machine to eliminate ceramic, stone, and porcelain, magnets to extract ferrous metals, and eddy currents to repel non-ferrous metals.

The glass undergoes a crushing phase to attain a uniform size, which enables more accurate separation. Afterward, the material is screened to remove any fines. The next step involves separating materials lighter than glass through density separation, and this phase is designed to minimize dust exposure.

Moving further in the process, there's the first sorting stage where lead glass is distinguished from glass ceramics. This separation is based on analysing the elemental composition of the glass fragments to detect elements such as zinc, zirconium, strontium, and lead, which allows for the accurate separation of lead glass and ceramic glass. The glass ceramics are discarded into a ceramics bunker, while the lead glass fragments are transferred for further sorting to remove any remaining metal fragments.

Subsequently, in the second sorting stage, lead glass fragments enter a unit where a camera detects materials that are not glass (e.g., metals, stones, ceramics) and air valves eject these materials into a discharge chute. The glass fragments continue their trajectory, falling onto a conveyor for further transportation, while the non-glass materials are sorted into their respective bunker. The process continues with the third and fourth sorting stages, where a unique combination of separators is employed to sort the glass fragments (cullet) into specific colour streams, which include amber, green, and flint (clear/opaque). In these stages, air valves and nozzles are used to separate the desired colours. Each colour-separated cullet is transported to their respective storage bunkers located on the northern side of Building 1 (refer to **Figure 3-2**), prior to being collected and transported via B-doubles and/or semi-trailers to glass manufacturing facilities elsewhere to make new recycled glass bottles.

The Glass Beneficiation Plant (GBP) is currently working below the designed maximum processing capacity of 100,100 tpa. Approximately 26% of the materials currently received at the MRF is glass (i.e. 18,174 tpa), which is then processed at the GBP. The maximum throughput of mixed waste that will be processed at the MRF will not surpass 170,000 tpa.

Due to the facility's designed processing capabilities, the following are not required; Amendments to site layout and infrastructure (changes to existing approved buildings, plant, or equipment).

Inherent outcomes of the increase processing capacity include; increased traffic flow to deliver and transport the additional product, increased operational hours to process the product and an increase in staffing numbers to monitor and control increased operation. The current site lay out will remain as is and is shown in **Figure 3-2**. Per day the facility will see an additional 13 B-doubles and/or semi-trailers delivering glass to the site, 3 B-doubles and/or semi-trailers collecting the processed glass to transport off-site and up to 6 additional staff vehicles. Six full time staff members are to be employed, allowing for an additional 3 personnel per shift. To keep up with production, it is proposed that the existing approved hours of operation for the receipt of materials at the MRF

are to be increased by 2 hours from Monday to Saturday 4:30 am to 3:00 pm (existing) to Monday to Saturday 4:30 am to 6:00 pm (proposed). These additional hours are to accommodate the additional daily truck movements delivering the additional glass to the site.

3.3 Quantities of Dangerous Goods

The maximum quantities of DGs proposed to be stored at the site have been provided in **Table 3-1**.

Table 3-1: Classes and Quantities of DGs Stored and Handled

Storage/handling Context	Class	Description	PG	Current Approved Quantity	Proposed Additional Quantity	Total Quantity
Maximum quantities <i>processed (handled)</i> on-site <i>per annum</i> .	n/a	Materials Received (Glass, Plastic and Metal waste)	n/a	69,900 tpa	100,100 tpa	170,000 tpa
	n/a	Paper/Card boards	n/a	30,000 tpa	No addition proposed	30,000tpa
Maximum quantities stored on-site at any one time.	n/a	Waste Storage (plastics, metals, papers/cardboards and glass)	n/a	4,200 T	3,800 T	8,000 T

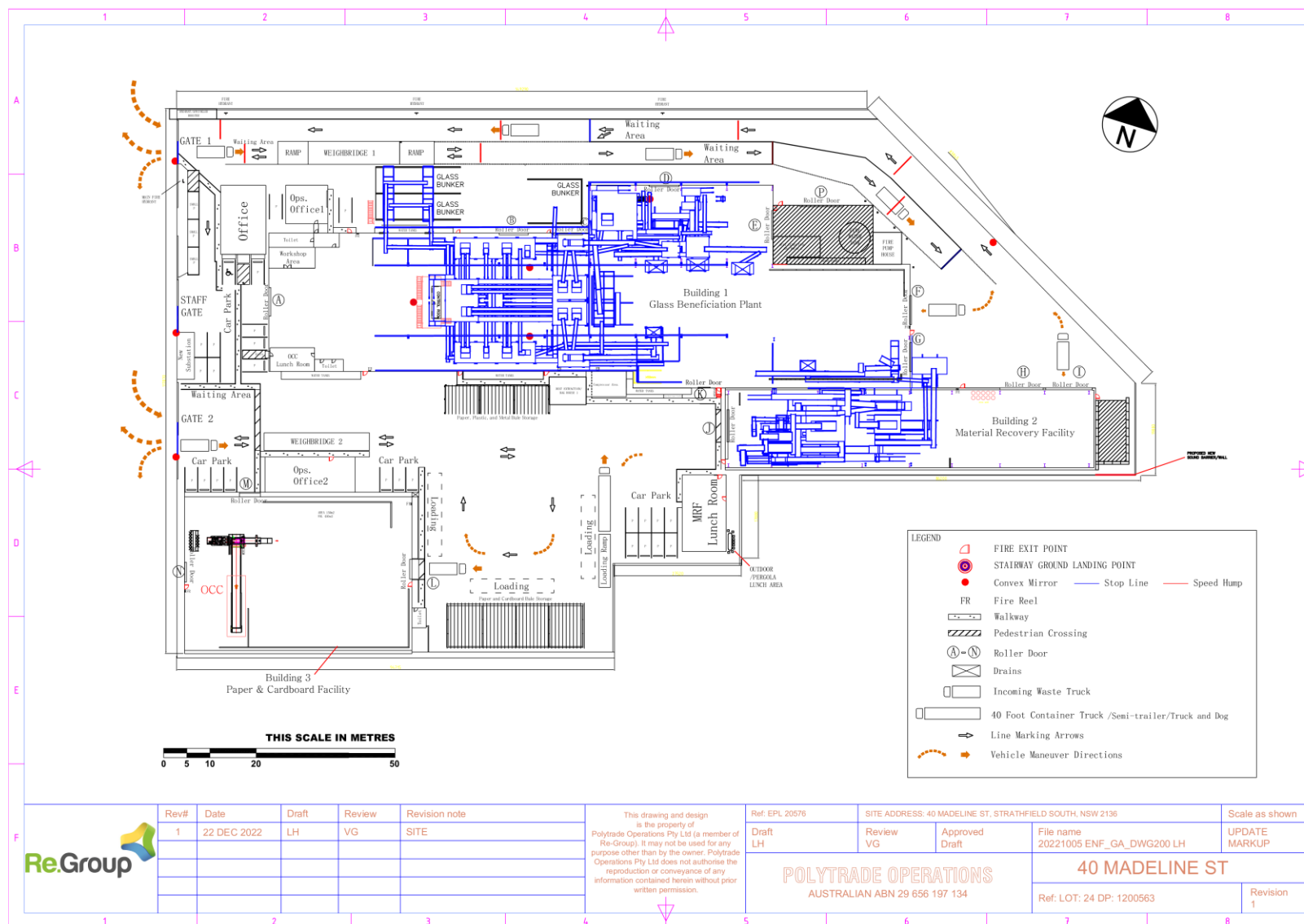


Figure 3-2: Site Layout

4.0 SEPP-RH Review

4.1 Application of Chapter 3 of State Environmental Planning Policy (Resilience and Hazards) 2021

State Environmental Planning Policy (Resilience and Hazards) 2021 (which now includes the former SEPP 33) has been developed under the Environmental Planning and Assessment Act 1979 to control potentially hazardous and offensive developments and to ensure appropriate safety features are installed at a facility to ensure the risks to surrounding land uses is minimised.

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

4.2 Proposed Storage Details

The additional quantity of glass and waste has been provided in **Table 4-1** which also includes an assessment of whether the Class is subject to SEPP-RH.

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

Class	Description	PG	Quantity	Class Subject to SEPP 33 (Y/N)
n/a	Materials Received (Glass, Plastic, Metal waste and Paper/Card boards)	n/a	200,000 tpa	N
n/a	Waste (plastics, metals, papers/cardboards)	n/a	8,000 T Onsite	N

4.3 Assessment of Hazards

4.3.1 Storage of Glass

As noted in **Table 4-1**, glass is not subject to assessment under the SEPP-RH policy. This is due to the glass being a non-combustible, non-toxic material and does not present a significant hazard to the surrounding land uses. As the facility is increasing the processing intake of glass and subsequently storing the glass product in containment areas, the risk of fire is negligible. The increased throughput does not involve the storage of additional chemicals and DGs requiring for the processing stage due to the process being primarily mechanical driven. Glass is solid and relatively dense, and since the process line is highly successful at removing glass dust, it is very unlikely that any product will disperse into and impact the surrounding environment. Therefore, the subsequent off-site impacts are expected to be negligible. As glass is non-combustible and does not present any toxic impacts, the risks are very low and that the increase of glass storage and processing onsite would not lead to a significantly increased potential impact on the surrounding environment.

4.3.2 Storage of waste

As indicated in Table 4-1, the waste materials to be stored are not subject to assessment under the SEPP-RH policy. This is because they are non-flammable and non-toxic materials, presenting no significant hazard to the surrounding land uses. Paper, cardboard, and plastic are combustible materials, which pose a potential fire risk if ignited. The waste products are sorted and bundled into compact units for storage outside before being transported to a different facility for further processing. Polytrade have reviewed the implications of increased mixed waste throughput, concluding that the increase does not materially change the required capacity of storage areas and configuration of processing equipment currently utilised at the facility, effectively operating under the current configuration. Since the waste is held by the facility for a limited time and is stored in an orderly and compact manner, the risk of combustion is low, and subsequent off-site impacts are expected to be negligible.

4.3.3 Transport

The current provisions undertaken for traffic flow and containment are acceptable and do not require amendment.

The glass is to be loaded as is currently. As glass is not classed as a DG, a review of **Figure 2-3** indicates no applicable transport threshold; hence, there would be no limit to deliveries and outgoing removal of glass at the site.

The additional 6 light vehicles to enter the employee carpark each day will not encroach on stores of DG's and are not subject to transport screening thresholds specified in SEPP-RH. The inherent risk is considered to be negligible.

Therefore, as the transport screening thresholds of SEPP-RH would not be exceeded; SEPP-RH does not apply.

5.0 Conclusion and Recommendations

5.1 Conclusions

A review of the quantities of DGs to be stored at the facility and associated vehicle movements was conducted and compared to the threshold quantities set out in “Applying SEPP 33”. The results of this analysis indicate the threshold quantities for the DGs to be stored and transported will not be exceeded, hence, Chapter 3 of SEPP-RH does not apply to the project.

As the facility is not classified as potentially hazardous or offensive, it is not necessary to prepare a PHA for the facility, as Chapter 3 of SEPP-RH does not apply.

5.2 Recommendations

No recommendations have been made as a result of this assessment.

6.0 References

- [1] "Protection of the Environment Operations Act," 1997.
- [2] "Protection of the Environment Operations (General) Regulation," 2009.
- [3] "State Environmental Planning Policy (Resilience and Hazards)," 2021.
- [4] "Applying SEPP 33: Hazardous and Offensive Development Application Guidelines," NSW Department of Planning, 2011.