

# Hazards & Risks Assessment



SIMTA

SYDNEY INTERMODAL TERMINAL ALLIANCE

Transitional Part 3A Concept Plan Application

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# SYDNEY INTERMODAL TERMINAL ALLIANCE

## SIMTA INTERMODAL TERMINAL

### Potential Hazards and Risk Assessment

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#### Transitional Part 3A Concept Plan Application

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# EXECUTIVE SUMMARY

The Sydney Intermodal Terminal Alliance (SIMTA) is a consortium of Qube Logistics and Aurizon. The SIMTA site is located on the land parcel known as the Defence National Storage and Distribution Centre (DNSDC) site in Moorebank Avenue, Moorebank, south-west of Sydney. SIMTA proposes to develop the DNSDC site into an intermodal terminal facility and warehouse/distribution centre, which will offer container storage and warehousing solutions with direct rail access.

This report assesses the potential hazards and risks to support the environmental assessment for Concept Plan approval of the SIMTA proposal as a transitional Part 3A Project under Schedule 6A of the *Environmental Planning and Assessment Act 1979* (EP&A Act) for the development of an intermodal terminal facility and warehousing and distribution centre. The report addresses the Director-General's Requirement (DGRs) issued under Part 3A of the EP&A Act on the 24 December 2010 and identifies the relevant legislation, codes and guidelines which would be implemented by SIMTA to manage risks and hazards associated with its construction and operation.

Key potential hazards and risks identified in the report are:

- Presence of asbestos in existing structures and the soil.
- Potential transport, storage and handling of dangerous goods.
- Bushfire.

The following recommendations are made to address these potential risks and hazards:

- An asbestos management plan will be developed for the SIMTA proposal containing a risk assessment undertaken in accordance with *Model Code of Practice - How to Manage and Control Asbestos in the Workplace* (Safe Work Australia, 2011).
- Where the management plan recommends the removal of asbestos from site all works would be undertaken in accordance with the *Model Code of Practice – How to Safely Remove Asbestos* (Safe Work Australia, 2011), including the development of an asbestos removal control plan and an emergency plan.
- Goods transported to the SIMTA site would be subject to the controls and restrictions for the storage and handling of dangerous goods on the Southern Sydney Freight Line (SSFL) and Port Botany. Additional engineering and design controls are not proposed for operation of the intermodal terminal or rail link. Should future tenants propose to store dangerous goods at the SIMTA site the siting of such warehouses and their design would be subject to hazard and operability studies, fire safety studies and a hazard analysis.
- Hazards and risks associated with construction and operation of the SIMTA proposal would be managed through the implementation of management standards and/or procedures, as identified in this report.
- A preliminary hazard analysis would be undertaken either during project application approval stages (if tenants and purposes have been defined) and/or by tenants during the operational phase of development, as required by SEPP 33. Once the level of risk has been identified the aim would be to reduce the risk to as low as reasonably possible through the application of specific operational management procedures that would form part of a framework for managing risks, captured within the facility's Hazard and Risk Management Plan and Emergency Response Plan. Should unacceptable levels of risk be identified during the PHA, SIMTA would require potential tenants to demonstrate measures to reduce the risk to an acceptable level prior to acceptance of tenancy.

- SIMTA would require all tenants to disclose the type and quantity of goods entering the SIMTA site prior to award of tenancy. Prior to commencement of a lease on the SIMTA site, all tenants that will handle dangerous goods would be required to sign on to SIMTA's Hazard and Risk Management Plan and the Emergency Response Plan for the site. These plans will be reviewed regularly and updated as goods entering the site may change with the tenancies. The requirements in the Code of Practice for storage and handling of dangerous goods (Work Cover NSW, 2005) and Model Code of Practice - Labelling of Workplace Hazardous Chemicals (Safe Work Australia 2011) would be adopted in these plans as a minimum.
- The key objectives identified by the RFS, will be incorporated into future design stages, in accordance with the following principles:

### Afford occupants of any building adequate protection from exposure to a bushfire.

Buildings will be designed to comply with AS 3959:2009, as adopted by the *Building Code of Australia* (BCA) (2010), which details construction requirements for buildings in bushfire prone areas. In particular, buildings will be designed and positioned to resist burning embers, radiant heat and flame contact, through measures such as constructing buildings of non-combustible materials, installation of screens over any windows, gutter guards on roofs.

### Ensure safe operational access and egress for emergency service personnel and residents

The design of roads (internal and perimeter) will be such that:

- Fire fighters and their vehicles and equipment are provided with safe all-weather access to structures
- Public road widths allow safe access for fire fighters while occupants are evacuating an area
- The capacity of road surfaces and bridges is sufficient to carry fully loaded fire fighting vehicles
- Site occupants are afforded safe exits from the site under various fire scenarios.

### Provide for ongoing management and maintenance of bushfire protection measures, including fuel loads in asset protection zones (APZs)

Due to the proximity of Bushfire Prone Land to the proposal site (Figure 5), an APZ will be established and maintained, most likely along the eastern, southern and western boundaries of the site. Exact locations and widths of APZs for the proposed development may be defined by the Rural Fire Service Development Assessment and Planning division upon finalisation of development plans.

### Ensure that utility services are adequate to meet the needs of fire fighters

With regard to utilities, consideration should be given to reticulated water supplies being easily accessible and located at regular intervals, that the location of electricity services limits the risk of ignition of surrounding bushland or the fabric of buildings and that the location of gas services will not increase the risk of ignition of surrounding bushland or the fabric of buildings.



A Bushfire Management Plan would also be developed for both the construction and operational phases of the SIMTA proposal that would align with the requirements of the local RFS Bushfire Management Committee operational plans of management.



# 1 INTRODUCTION

The Sydney Intermodal Terminal Alliance (SIMTA) is a consortium of Qube Logistics and Aurizon (formerly QR National). The SIMTA Moorebank Intermodal Terminal Facility (SIMTA proposal) is proposed to be located on the land parcel currently occupied by the Defence National Storage and Distribution Centre (DNSDC) on Moorebank Avenue, Moorebank, south west of Sydney. SIMTA proposes to develop the DNSDC occupied site into an intermodal terminal facility and warehouse/distribution facility, which will offer container storage and warehousing solutions with direct rail access to Port Botany. Construction of the rail connection from the SIMTA site to the Southern Sydney Freight Line (**SSFL**) will be undertaken as part of the first stage of works for the SIMTA proposal.

This report has been prepared to support an environmental assessment for Concept Plan approval of the SIMTA proposal as a transitional Part 3A Project under Schedule 6A of the *Environmental Planning and Assessment Act 1979* (EP&A Act) for the development of an intermodal terminal facility and warehousing and distribution centre.

As part of the assessment process the potential hazards associated with the construction and operation of the SIMTA proposal has been reviewed. This assessment has largely focussed on the construction of the SIMTA proposal and operation of the intermodal terminal, as the actual tenants of the site are currently unknown. Requests to Sydney Ports Corporation for a breakdown of the dangerous goods classes and quantities currently handled through Port Botany have been declined and it has therefore not been possible to extrapolate the likely type and quantities of dangerous goods that may be handled at the SIMTA site. As such, risk screening and a preliminary hazard analysis (as required) could not be undertaken at this early stage of the project.

As tenancy arrangements are finalised and applications for the subsequent development stages are made, preliminary hazard assessments would be undertaken and submitted to the Department of Planning and Infrastructure for consideration.

SIMTA is committed to protecting the health and safety of its workforce, tenants and the community and all tenants operating on the site would be required to adhere to the requirements of the Hazard and Risk Management Plan, Emergency Response Plan and State and Federal legislation in accordance with current industry practice.

## 1.1 PROJECT OVERVIEW

### 1.1.1 SCOPE OF REPORT

The scope of this report is as follows:

- Review of site suitability for the SIMTA proposal.
- Identification of key legislative requirements associated with management and mitigation of potential hazards and risks.
- Identification of key potential risks and hazards associated with construction and operation of the SIMTA proposal.
- Review of key construction risks and mitigation measures to reduce risks in light of legislative requirements.
- Review of key operation hazards and risks and recommended management strategies and mitigation measures to reduce these risks in light of legislative requirements.

## 1.2 PURPOSE

This report has been prepared to assess the potential hazards and risks to support the environmental assessment for Concept Plan approval as a transitional Part 3A project under Schedule 6A of the *Environmental Planning and Assessment Act 1979* for the development of the SIMTA proposal and warehouse/distribution facilities. The report addresses the Director's-General's Requirements (DGRs) relating to hazards and risks issued on the 24 December 2010, which are as follows:

**Table 1: Director's General's Requirements**

Director General's Requirement	Section Addressed
Potential hazards and risks associated with the site as a whole and off-site, taking into account activities that have the potential to cause harm to people and/or the environment, including potential impacts associated with storing and handling dangerous goods onsite and transporting such goods to and from the site consistent with the guideline <i>Applying SEPP No. 33</i> (Consultation Draft) (Department of Planning, 2008a), and taking into account <i>Planning Advisory Paper (HIAP) No 10: Land Use Safety Planning</i> (Consultation Draft) (Department of Planning, 2008b).	Section 5.1 & Section 2
A Preliminary Hazard Analysis, if relevant, in accordance with the <i>Hazardous Industry Planning Advisory Paper No. 6: Hazard Analysis</i> (Consultation Draft) (Department of Planning, 2008c).	Not relevant at Concept Plan stage
Bushfire protection, taking into account <i>Planning for Bushfire Protection</i> (RFS).	Section 5.2

This report also considers key hazards and risks associated with construction of the SIMTA proposal.

## 2 SITE SUITABILITY

### 2.1.1 SITE DESCRIPTION

The SIMTA site is located in the Liverpool Local Government Area. It is 27 kilometres west of the Sydney CBD, 17 kilometres south of the Parramatta CBD, 5 kilometres east of the M5/M7 Interchange, 2 kilometres from the main north-south rail line and future Southern Sydney Freight Line, and 0.6 kilometres from the M5 motorway.

The SIMTA site, approximately 83 hectares in area, is currently operating as a Defence storage and distribution centre. The SIMTA site is legally identified as Lot 1 in DP1048263 and zoned as General Industrial under Liverpool City Council Local Environment Plan 2008. The parcels of land to the south and south west that would be utilised for the proposed rail link are referred to as the rail corridor. The proposed rail corridor covers approximately 75 hectares and adjoins the Main Southern Railway to the north. The rail line is approximately 3.5 kilometres in length, 20 metres in width (variable width) and includes two connections to the SSFL, one south and one north.

The proposed rail corridor is owned by third parties, including the Commonwealth of Australia, RailCorp, private owners and Crown Land held by the Department of Primary Industries, and would link the SIMTA site with the Southern Sydney Freight Line. Existing uses include vacant land, existing rail corridors (East Hills Railway and Main Southern Railway), extractive industries, and a waste disposal facility. The rail corridor is intersected by Moorebank Ave, Georges River and Anzac Creek. Native vegetation cover includes woodland, forest and wetland communities in varying condition. The proposed rail corridor is zoned partly 'SP2 Infrastructure (Defence and Railway)' and partly 'RE1 - Public Recreation'. The surrounding Commonwealth lands are zoned 'SP2 Infrastructure (Defence)'.

**Table 1** shows the lot and deposited plan number of the land parcels that will be impacted by the SIMTA proposal.

**Table 1: Land parcels of the SIMTA proposal**

Lot	Deposited Plan	Property Address/Description
1	1048263	Moorebank Avenue, Moorebank (SIMTA Site)
3001	1125930	Moorebank Avenue, Moorebank (land immediately south and south-west of SIMTA Site, including School of Military Engineering and site of the proposed Moorebank Intermodal Terminal project)
1	825352	Railway land and to the north of East Hills Railway Line
2	825348	
1	1061150	
2	1061150	
1	712701	
5	833516	Privately owned land north of East Hills Railway Line, east of Cumberland & South Passenger Line and Southern Sydney Freight line and west of Georges River
7	833516	
51	515696	

Lot	Deposited Plan	Property Address/Description
52	517310	
104	1143827	
103	1143827	
91	1155962	
4	1130937	Land west of the Georges River, north of the above privately owned land
5	833516	Railway land along shared railway line – Cumberland & South Passenger Line and Southern Sydney Freight Line
101	1143827	
102	1143827	
Conveyance Book 76	Number 361	Main Southern Rail Corridor
NA	NA	Georges River (Crown Land)

## 2.1.2 TRANSPORT AND STORAGE OF GOODS

The SIMTA proposal would enable efficient rail freight transport along the Southern Sydney Freight Line (SSFL) to and from Port Botany. The location of the site within the vicinity of the SSFL and the M5 and Hume Highway would enable the efficient transport of freight between Port Botany and the south-western Sydney freight catchment. Freight would arrive by rail and be transported to the warehouse and distribution facilities within the SIMTA site, or be directly loaded on to trucks for transport to warehouses and nearby logistics centres. The terminal would have capacity for four permanent rail sidings, with one interim siding, with areas for container handling and storage and would have the capacity to handle a throughput of up to 1 million twenty-foot equivalent units (TEU) per annum when operating at full capacity.

Distribution and collection of goods from the SIMTA site would be by road. Access to and from the site for trucks is via Moorebank Avenue, which intercepts directly with the South Western Motorway (M5) to the north. The M5 joins the Westlink (M7) approximately 4.8 kilometres to the south-west. Other major roads include the Hume Highway to the west and Heathcote Road to the east.

The SIMTA site will also house approximately 300,000 m<sup>2</sup> of warehouses with ancillary offices, located to the east of the intermodal terminal. The dimensions and fit out of these warehouses would be designed and constructed to meet tenant needs.

Contingent on the tenants of the SIMTA site, goods classified as dangerous goods under the *Australian Dangerous Goods Code* (National Transport Commission, 2007) and the *International Maritime Dangerous Goods Code (IMDG) 2010* may be transported along the rail link and stored/handled in the warehouses. Such goods would be handled in accordance with the relevant local and international legislation and industry best management practices. These are discussed in detail in sections 3, 4.2 and 6.1.

### 2.1.3 SURROUNDING LAND USE

The SIMTA site is approximately 2.5 kilometres to the south of Liverpool City Centre. The site is also located near a number of existing industrial areas, including Moorebank (Yulong and Amiens) and Warwick Farm to the north, Chipping Norton to the north east, Prestons to the west and Glenfield and Ingleburn to the south-west. The Holsworthy Military Reserve is located to the south on the opposite side of East Hills Passenger Line.

Nearby residential areas include Wattle Grove, Moorebank and Holsworthy, which are located to the east and north-east. Wattle Grove is within the closest proximity, located approximately 450 metres east of the SIMTA site, while the Casula residential area is approximately one kilometre west of the SIMTA site, and approximately 400 metres west of the rail corridor. Figure 1 shows the surrounding land uses of the SIMTA site.

### 2.1.4 SITE SUITABILITY

The SIMTA site is zoned 'IN1 – Industrial' under the *Liverpool Local Environment Plan 2008*. The purpose of the zone is to:

- To provide a wide range of industrial and warehouse land uses.
- To encourage employment opportunities.
- To minimise any adverse effect of industry on other land uses.
- To support and protect industrial land for industrial uses.
- To particularly encourage research and development industries by prohibiting land uses that are typically unsightly or unpleasant.
- To enable other land uses that provide facilities or services to meet the day to day needs of workers in the area.

The SIMTA proposal is consistent with the land use intent.

The SIMTA proposal is compatible with the existing and proposed land uses and there is a minimum buffer between the site and the nearest residences of 400 metres (m).



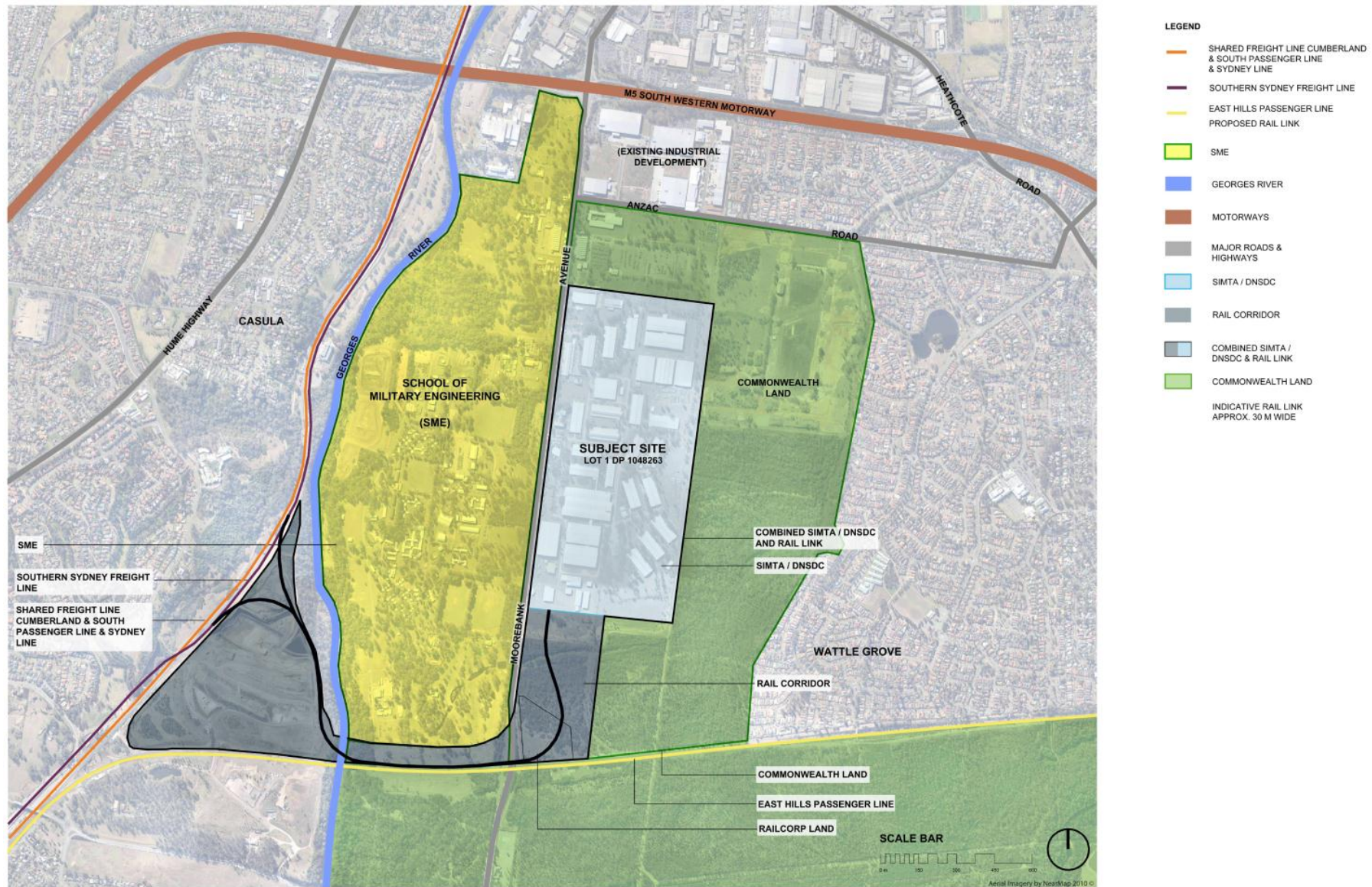


Figure 1: SIMTA site and surrounding land use



### 3

## LEGISLATIVE TRIGGERS AND REQUIREMENTS

Risks to health and safety during construction and operation of the SIMTA proposal comprise:

- The potential for the transport and storage of dangerous goods to the SIMTA site.
- Presence of contaminated land at the waste facility within the rail corridor.
- Presence of asbestos on the SIMTA site.
- Bushfire risk.

The following sections summarise the regulatory requirements that must be considered when addressing these risks.

### 3.1

## WORK HEALTH AND SAFETY ACT 2011

The *Work Health and Safety Act 2011* (WHS Act) aims to protect the health, safety and welfare of people at work. The Act sets out general requirements for health, safety and welfare, which must be met at all places of work in New South Wales. The objectives of the WHS Act are to provide a balanced and nationally consistent framework to secure the health and safety of workers and workplaces by:

- Protecting workers and other persons against harm to their health, safety and welfare through the elimination or minimisation of risks arising from work or from specified types of substances or plant.
- Providing for fair and effective workplace representation, consultation, co-operation and issue resolution in relation to work health and safety.
- Encouraging unions and employer organisations to take a constructive role in promoting improvements in work health and safety practices, and assisting persons conducting businesses or undertakings and workers to achieve a healthier and safer working environment.
- Promoting the provision of advice, information, education and training in relation to work health and safety.
- Securing compliance with the WHS Act through effective and appropriate compliance and enforcement measures.
- Ensuring appropriate scrutiny and review of actions taken by persons exercising powers and performing functions under the WHS Act.
- Providing a framework for continuous improvement and progressively higher standards of work health and safety.
- Maintaining and strengthening the national harmonisation of laws relating to work health and safety and to facilitate a consistent national approach to work health and safety in this jurisdiction.

The WHS Act allows for the formulation of industry codes of practice to provide practical guidance to employers and others who have duties under the act. While these codes are not legally binding, failure to show compliance with the code in the event of injury at a workplace may count against an employer during prosecution. All works for the SIMTA proposal must be undertaken in accordance with the WHS Act.

### 3.1.1 WHS REGULATION 2011

The *Work Health and Safety (WHS) Regulation 2011* was made under the *Work Health and Safety (WHS) Act 2011* and commenced on January 2012.

- **Chapter 2 – representation and participation:** provides additional details on the representation and participation arrangements under parts 5 and 7 of the WHS Act, including the establishment of workgroups, election and training entitlements of health and safety representatives, and matters relating to entry permit holders.
- **Chapter 3 – General risk and workplace management:** The WHS Regulations have generic risk management provisions including hazard identification and risk control measures. This approach to risk management is intended to focus on allowing the duty holder to identify the risk and if the risk cannot be eliminated, go straight to controls, where the control measures are well known or obvious. Risks must be managed, so far as reasonably practicable in accordance with the risk management hierarchy (elimination, substitution, isolation, administrative controls and personal protective equipment) or the measures prescribed under Chapter 4 of the WHS Regulations.
- **Chapter 4 – Hazardous work:** Chapter 4 contains specific requirements for the elimination or control of risks arising from several different hazards:
  - Noise.
  - Hazardous manual tasks.
  - Confined spaces.
  - Falls.
  - High risk work.
  - Demolition work.
  - Electrical work.
  - Diving work.
- **Chapter 5 – Plant and structures:** Chapter 5 sets out duties in relation to the design, manufacture, import, supply, management or control, and installation or commissioning, of plant and structures. The WHS Regulations also prescribe specific control measures for powered mobile plant, tractors, industrial lift trucks, registered mobile and tower cranes and lifts. **Chapter 6 – Construction work:** Chapter 6 sets out the definitions of ‘construction work’ and ‘high risk construction work’ and requires a principal contractor be nominated for large construction projects, such as the SIMTA proposal. There is a requirement for the principal contractor to prepare a Work Health and Safety Management Plan for the coordination of health and safety activities at the site. High risk construction work includes:
  - Work where there is a risk of a fall from two metres.
  - All demolition work.
  - Work that involves, or is likely to involve, the disturbance of asbestos.
- **Chapter 7 – Hazardous chemicals:** Chapter 7 of the WHS Regulations includes provisions for hazardous chemicals including lead and dangerous goods. Key areas covered in Chapter 7 include:
  - Determining whether a substance is hazardous.
  - The preparation of Material Safety Data Sheets (MSDS).

- The provision of information through labelling.
- The provision of health surveillance for employees exposed to hazardous materials.
- The keeping of certain records.
- **Chapter 8 – Asbestos:** Chapter 8 contains provisions relating to asbestos. This chapter includes requirements for the control of exposure to asbestos as well as requirements for persons who have management or control of a workplace to manage asbestos. This duty includes requirements relating to the identification of asbestos, recording the location of asbestos in a register, and planning for the management of asbestos.

This chapter also includes provisions for the licensing of asbestos removalists and asbestos assessors. Asbestos assessors will typically be occupational hygienists and only asbestos assessors will be able to conduct air monitoring and issue clearance certificates where friable asbestos is being removed.

## 3.2 SAFE WORK AUSTRALIA MODEL CODE OF PRACTICE – HOW TO MANAGE AND CONTROL ASBESTOS IN THE WORKPLACE (2011)

The *Model Code of Practice – How to Manage and Control Asbestos in the Workplace* (2011) provides practical guidance for persons conducting a business or undertaking on how to manage risks associated with asbestos and asbestos containing material (ACM) at the workplace to minimise the incidence of asbestos-related diseases such as mesothelioma, asbestosis and lung cancer. Table 2 summarises the key responsibilities for person conducting a business or undertaking (PCBU) as applicable to SIMTA and construction contractors that would undertake construction works the site.

**Table 2: Responsibilities relating to ACM management**

Duty holder	Responsibilities
Person conducting a business or undertaking (PCBU)	<p><b>Control risk of exposure</b></p> <ul style="list-style-type: none"> <li>• must ensure, so far as is reasonably practicable, that exposure of a person at the workplace to airborne asbestos is eliminated, except in an area that is enclosed to prevent the release of respirable asbestos fibres and negative pressure is used. If this is not reasonably practicable, the exposure must be minimised so far as is reasonably practicable</li> <li>• must ensure the exposure standard for asbestos is not exceeded at the workplace.</li> </ul> <p><b>Health monitoring</b></p> <ul style="list-style-type: none"> <li>• must ensure health monitoring is provided to a worker who is carrying out licensed removal work, other ongoing asbestos removal work or asbestos-related work and there is risk of exposure when carrying out that work</li> <li>• must ensure the health monitoring is carried out under the supervision of a registered medical practitioner and information as specified in the WHS Regulations is provided to that medical practitioner</li> <li>• must pay all expenses for health monitoring, obtain report and keep records of all health monitoring.</li> </ul> <p><b>Training and use of equipment</b></p> <ul style="list-style-type: none"> <li>• must ensure that information, training and instruction provided to a worker is suitable and adequate and that it is provided in a way that is readily understandable by any person to whom it is provided</li> <li>• must ensure that, if a worker is either carrying out asbestos-related work or may be involved in asbestos removal work, they are trained in the identification and safe handling of asbestos and ACM and the suitable control measures</li> <li>• for workers who carry out work where NOA is likely to be found, training must be provided</li> </ul>

Duty holder	Responsibilities
	<p>on hazards and risks associated with NOA.</p> <p><b>Controlling the use of equipment</b></p> <ul style="list-style-type: none"> <li>• must not use, or direct or allow a worker to use, certain equipment on asbestos and ACM.</li> </ul> <p><b>Asbestos-related work</b></p> <ul style="list-style-type: none"> <li>• must, if there is uncertainty as to whether work is asbestos-related work, assume asbestos is present or arrange for an analysis of a sample to be undertaken to determine if asbestos or ACM is present</li> <li>• must give information as specified in regulation 480 of the WHS Regulations to a person who is likely to be engaged to carry out asbestos-related work</li> <li>• must ensure the asbestos-related work area is separated from other work areas at the workplace, signs are used to indicate where the asbestos-related work is being carried out and barricades are used to delineate the asbestos-related work area</li> <li>• must ensure a competent person carries out air monitoring of the work area if there is uncertainty as to whether the exposure standard is likely to be exceeded</li> <li>• must ensure that decontamination facilities (including containers and labels labelled in accordance with the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)) are available when asbestos-related work is being carried out</li> <li>• must ensure that asbestos waste is contained and labelled in accordance with the GHS before it is removed, and is disposed of as soon as practicable</li> <li>• must ensure, where personal protective equipment (PPE) is used and contaminated with asbestos, such PPE is sealed, decontaminated, labelled and disposed of in accordance with the WHS Regulations. If this is not reasonably practicable, the PPE must be laundered in accordance with the WHS Regulations. PPE that is not clothing and cannot be disposed of must be decontaminated and kept in a sealed container until it is reused for the purposes of asbestos-related work.</li> </ul>
PCBU with management or control of a workplace	<p><b>Identifying or assuming asbestos or ACM</b></p> <ul style="list-style-type: none"> <li>• must ensure, so far as is reasonably practicable, that all asbestos or ACM at the workplace is identified by a competent person or assume its presence</li> <li>• may identify asbestos or ACM by arranging a sample of the material to be analysed.</li> </ul> <p><b>Indicating presence and location</b></p> <ul style="list-style-type: none"> <li>• must ensure the presence and location of asbestos or ACM identified (or assumed to be identified) at the workplace is clearly indicated (by a label if reasonably practicable).</li> </ul> <p><b>Asbestos register</b></p> <ul style="list-style-type: none"> <li>• must ensure an asbestos register is prepared, maintained, reviewed and kept at the workplace. It must be readily available to workers, their health and safety representatives and other persons</li> <li>• must ensure, when management or control of the workplace is relinquished, a copy of the asbestos register is given to the person assuming management or control.</li> </ul> <p><b>Asbestos management plan</b></p> <ul style="list-style-type: none"> <li>• must, where asbestos has been identified at the workplace, ensure an asbestos management plan is prepared, maintained and reviewed. It must be accessible to workers, their health and safety representatives and other persons.</li> </ul> <p><b>Demolition and Refurbishment Work</b></p> <ul style="list-style-type: none"> <li>• prior to demolition or refurbishment work starting, must review the asbestos register and ensure all asbestos that is likely to be disturbed is identified and removed so far as is reasonably practicable</li> <li>• must provide a copy of the asbestos register to the person carrying out the demolition or refurbishment work before the work commences</li> <li>• must, if an emergency occurs and a structure or plant is to be demolished, ensure that before the demolition occurs there is a procedure to reduce the risk of exposure to asbestos to below the exposure standard and notify the regulator about the emergency.</li> </ul>

Duty holder	Responsibilities
PCBU carrying out demolition or refurbishment work	<b>Demolition and Refurbishment Work</b> <ul style="list-style-type: none"> <li>must, prior to the demolition or refurbishment work being carried out: <ul style="list-style-type: none"> <li>obtain a copy of the asbestos register for the workplace from the person with management or control before the work commences</li> <li>if an asbestos register is not available, ensure the structure or plant to be demolished or refurbished has been inspected by a competent person to determine if any asbestos or ACM is fixed to or installed (or assume its presence)</li> <li>where asbestos is determined to be fixed to or installed, tell the occupier or the person with management or control in any other case</li> </ul> </li> </ul>

### 3.3 SAFE WORK AUSTRALIA MODEL CODE OF PRACTICE – HOW TO SAFELY REMOVE ASBESTOS (2011)

The *Model Code of Practice – How to Safely Remove Asbestos* (Safe Work Australia, 2011) provides practical guidance for PCBUs who have duties under the WHS Act and WHS Regulations to safely remove asbestos from all workplaces including structures, plant and equipment. The Model Code of Practice – How to Safely Remove Asbestos should be read in conjunction with the Model Code of Practice – How to Manage and Control Asbestos in the Workplace.

The Model Code of Practice – How to Safely Remove Asbestos outlines the licencing requirements established under Clause 458 of the WHS Regulations and are shown in Table 3.

**Table 3: Licensing requirements for asbestos removal**

Type of licence	What asbestos can be removed?
Class A	Can remove any amount or quantity of asbestos or ACM, including: <ul style="list-style-type: none"> <li>any amount of friable asbestos or ACM</li> <li>any amount of ACD</li> <li>any amount of non-friable asbestos or ACM.</li> </ul>
Class B	Can remove: <ul style="list-style-type: none"> <li>any amount of non-friable asbestos or ACM Note: A Class B licence is required for removal of more than 10 m<sup>2</sup> of non-friable asbestos or ACM but the licence holder can also remove up to 10 m<sup>2</sup> of non-friable asbestos or ACM.</li> <li>ACD associated with the removal of non-friable asbestos or ACM. Note: A Class B licence is required for removal of ACD associated with the removal of more than 10 m<sup>2</sup> of non-friable asbestos or ACM but the licence holder can also remove ACD associated with removal of up to 10m<sup>2</sup> of non-friable asbestos or ACM.</li> </ul>
No licence required	Can remove: <ul style="list-style-type: none"> <li>up to 10 m<sup>2</sup> of non-friable asbestos or ACM</li> <li>ACD that is: <ul style="list-style-type: none"> <li>associated with the removal of less than 10 m<sup>2</sup> of non-friable asbestos or ACM</li> <li>not associated with the removal of friable or non-friable asbestos and is only a minor contamination.</li> </ul> </li> </ul>

The WHS Regulations require that a person must hold an asbestos assessor licence to conduct the following:

- Air monitoring for Class A asbestos removal work.
- Clearance inspections for Class A asbestos removal work.
- Issuing clearance certificates in relation to Class A asbestos removal work.

A licensed assessor can also carry out a number of other tasks including identifying asbestos, carrying out a risk assessment or reviewing an asbestos register.

### 3.4 *CODE OF PRACTICE FOR THE STORAGE AND HANDLING OF DANGEROUS GOODS (2005)*

The WorkCover NSW *Code of Practice for the Storage and Handling of Dangerous Goods (Code Of Practice) 2005* provides practical guidance to occupiers of premises on the safe storing and handling of dangerous goods, so that all persons (including members of the public) are not exposed to risks to their health and safety arising from dangerous goods at the occupier's premises.

The code of practice applies to workplaces regardless of quantities stored, handled or used, however, the code provides for a risk-based approach and not all chapters must be adhered to if not applicable. The code of practice comprises the following chapters:

- **Chapter 2:** focuses on implementing safety by planning and applying risk management principles to the use of dangerous goods, including the storage and handling of containers.
- **Chapter 3:** focuses on the identification of dangerous goods and obtaining and providing information on those goods through a material safety data sheet (MSDS).
- **Chapter 4:** establishes the requirements for workplaces where small amounts of dangerous goods are stored and handled.
- **Chapter 5:** is applicable only to retail outlets, including sales of consumer packages and situations where customers provide a container for refilling.
- **Chapter 6:** is applicable to premises where the dangerous goods stored or handled are above the "placard quantities" shown in Appendix 2 of this code of practice.
- **Chapter 7:** is applicable to premises where the dangerous goods stored or handled are above the "placard quantities" shown in Appendix 2 of this code of practice. In general, the code notes that risks are proportional to the overall quantity of dangerous goods stored or handled.
- **Chapter 8:** establishes the protocol for determining control measures and applying the hierarchy of control (i.e. elimination, substitution, isolation, engineering controls, administrative controls and personal protective equipment).
- **Chapter 9:** provides general examples of risks and typical controls, which may or may not be applicable for the dangerous goods handled or stored at a particular premises. The applicability of the controls should be determined through the risk assessment undertaken in Chapter 7.
- **Chapter 10:** provides controls for specific types of dangerous goods including, aerosols, gas cylinders and flammable liquids.
- **Chapter 11:** provides for controls during transfer, including transfer within a premises.
- **Chapter 12:** provides for the establishment of "fire protection system" includes fire detection, fire suppression and fire fighting equipment, which may be fixed or portable.



- **Chapter 13:** is applicable to transit and temporary storage of dangerous goods in quantities above the placard quantities of Appendix 2.
- **Chapter 14:** provides for the preparation of an emergency plan to minimise the effects of any incident or serious incident that may occur and involve the dangerous goods.
- **Chapter 15:** sets out the requirements for placarding and signage as required by clauses 174ZJ to 174ZM of the OH&S Regulation.
- **Chapter 16:** describes additional requirements for premises where dangerous goods are stored and handled in relatively large quantities, above the “Manifest quantities” in Appendix 2 and notification of premises to Workcover.
- **Chapter 17:** sets out training requirements, which should be identified in the risk assessment stage and developed in consultation with employees.

The applicability of chapters within the code of practice will be determined once the type and volumes of materials to be stored on site have been determined.

### 3.5 INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA (SOLAS) 1988

The *International Convention for the Safety of Life at Sea* (SOLAS) is an international maritime safety treaty governed by the International Maritime Organisation (IMO) in London. The convention ensures that ships flagged by signatory States comply with minimum safety standards in construction, equipment and operation.

Chapter VII of the Convention relates to the Carriage of Dangerous Goods. It requires the carriage of all kinds of dangerous goods to be in compliance with the *International Maritime Dangerous Goods Code* (IMDG Code).

All container vessels calling at Port Botany and therefore handling those containers destined to or originating from the SIMTA facility are signatories to the Convention, therefore all cargoes carried in those containers are subject to the rules of the Convention.

### 3.6 INTERNATIONAL MARITIME DANGEROUS GOODS CODE (IMDG) 2012

The *International Maritime Dangerous Goods Code* is the accepted international guideline to the safe transport of dangerous goods by sea covering such matters as product identification, terminology, packing, stowing, labelling, placarding, marking and segregation of incompatible substances, handling and emergency response.

The code covers not only the carriage of goods by sea, but also by all those involved in industries and services connected with shipping, including warehousing, packing/unpacking, transport and distribution, intermodal/rail operations and stevedoring.

No person or party may offer dangerous goods for transport by road, rail or sea, unless those goods are properly packed, marked, labelled, placarded, described and certified on a transport document in accordance with the IMDG Code.

A full description of IMDG Classes is provided in Section 5, Table 5.

### 3.7 SYDNEY PORTS CORPORATION *DANGEROUS GOODS MANAGEMENT GUIDELINES 2013*

Sydney Ports Corporation (SPC) under its obligation to both local and international legislation with regard to the handling of dangerous goods, published a set of *Dangerous Goods Management Guidelines* for use by all parties involved in the international movement of dangerous goods by sea and transiting through the port as part of an international trade movement.

The guidelines essentially ensure that all dangerous goods transiting the port conform to the local and international regulations covered in this report and provides a further level of management and control of dangerous goods in the port supply chain. Accordingly all containerised dangerous goods transiting the port to or from the SIMTA facility will also be subject to SPC's Dangerous Goods Management Guidelines.

### 3.8 *DANGEROUS GOODS (ROAD AND RAIL TRANSPORT) ACT 2008*

The *Dangerous Goods (Road and Rail Transport) Act 2008* (Dangerous Goods R&R) Act) commenced in 2009 and replaces the *Road and Rail Transport (Dangerous Goods) Act 1997*. The act provides for the regulation of the transport of dangerous goods by road and rail in order to promote public safety and protect property and the environment. The Dangerous Goods R&R Act provides for:

- Licensing of vehicles and drivers transporting dangerous goods.
- Goods that are too dangerous to be transported.
- Establishes duties concerning the transport of dangerous goods.
- Establishes regulations and codes of conduct.

Transport of dangerous goods to and from the SIMTA site will be subject to the Dangerous Goods R&R Act and its regulations.

#### 3.8.1 *DANGEROUS GOODS (ROAD AND RAIL TRANSPORT) REGULATION 2009*

The main objectives of the Dangerous Goods (Road and Rail Transport) Regulation 2009 (Dangerous Goods R&R Regulation) are to:

- Set out the obligations of persons involved in the transport of dangerous goods by land transport.
- Reduce as far as practicable the risks of personal injury, death, property damage and environmental harm arising from the transport of dangerous goods by land transport.
- Give effect to the standards, requirements and procedures of the Australian Dangerous Goods (ADG) Code so far as they apply to the transport of dangerous goods by land transport.
- Promote consistency between the standards, requirements and procedures applying to the transport of dangerous goods by land transport and other modes of transport.



### 3.8.2 AUSTRALIAN DANGEROUS GOODS CODE

The purpose of the ADG Code is to provide consistent technical requirements for the land transport of dangerous goods across Australia. Chapter 2 of the ADG Code provides for the classification of dangerous goods in accordance with the *United Nations (UN) Recommendations on the Transport of Dangerous Goods - Model Regulations 2002*. The code lists provisions applicable to the transport of dangerous goods including:

- Classification.
- Packaging and performance testing.
- Use of bulk containers, IBCs Freight containers and unit loads.
- Marking and placarding.
- Vehicle requirements.
- Segregation and stowage.
- Transfer of bulk dangerous goods.
- Documentation.
- Safety equipment.
- Procedures during transport.
- Emergencies.
- The dangerous goods list with UN numbers.

The ADG Code also contains 'exemption limits' which are limits, below which, the goods are no longer classified as dangerous goods. Transport of dangerous goods in volumes above the exemption limits to and from the SIMTA site must be in accordance with the ADG Code.

## 3.9 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

The *Environmental Planning and Assessment Act 1979* (EP&A Act) is the principle legislation guiding planning decisions in New South Wales. Part 3 of the EP&A Act allows for the formulation of State Environmental Planning Policies (SEPPs) in order to provide protection to the environment or community or control development. Two SEPPs are relevant to the hazards and risks discussed in this report and are expanded on below.

Section 79B of the EP&A Act requires all new development on bushfire prone land to comply with *Planning for Bush Fire Protection 2006*, which forms the basis for all bush fire planning and bushfire protection measures for new development in NSW and is discussed below.

## 3.10 STATE PLANNING POLICY 33 - HAZARDOUS AND OFFENSIVE DEVELOPMENT (SEPP 33)

The aim of SEPP 33 is to allow for the assessment of the environmental and safety performance of hazardous and offensive or potentially hazardous and offensive. SEPP 33 sets out to:

- Amend the definitions of hazardous and offensive industries where used in environmental planning instruments.

- Render ineffective a provision of any environmental planning instrument that prohibits development for the purpose of a storage facility on the ground that the facility is hazardous or offensive if it is not a hazardous or offensive storage establishment as defined in the Policy.
- Ensure that in determining whether a development is a hazardous or offensive industry, any measures proposed to be employed to reduce the impact of the development are taken into account.
- Ensure that in considering any application to carry out potentially hazardous or offensive development, the consent authority has sufficient information to assess whether the development is hazardous or offensive and to impose conditions to reduce or minimise any adverse impact.

Under SEPP 33 potentially hazardous and potentially offensive industries have the following definitions:

‘Potentially hazardous industry’ is defined as development for the purposes of any industry which, if the development were to operate without employing any measures (including, for example, isolation from existing or likely future development on other land) to reduce or minimise its impact in the locality or on the existing or likely future development on other land, would pose a significant risk in relation to the locality:

- To human health, life or property; or
- To the biophysical environment, and includes a hazardous industry and a hazardous storage establishment.

‘Potentially offensive industry’ means a development for the purposes of an industry which, if the development were to operate without employing any measures (including, for example, isolation from existing or likely future development on other land) to reduce or minimise its impact in the locality or on the existing or likely future development on other land, would emit a polluting discharge (including for example, noise) in a manner which would have a significant adverse impact in the locality or on the existing or likely future development on other land, and includes an offensive industry and an offensive storage establishment.

Whether the SIMTA proposal will trigger SEPP 33 is dependent on the tenants that will ultimately occupy the site, which will determine the types and quantities of goods handled at the site. Certain classes of dangerous goods, such as Class 1 – Explosives and Class 7 – Radioactive Materials, will not be handled or stored at the site as their transport is not permissible along the SSFL. An assessment of whether this SEPP is triggered will be made during the subsequent project approval application stages as tenancy on the site is determined.

### 3.10.1 APPLYING SEPP 33 (CONSULTATION DRAFT)

The objective of *Applying SEPP 33 (Consultation Draft)* (DoP, 2008) is to provide advice on implementing SEPP 33 by:

- Clarifying the type of development to which the policy applies, particularly in respect to storage establishments.
- Establishing a risk screening process with screening thresholds and provides a discussion of factors that can cause a development to be potentially hazardous, even when screening thresholds are not exceeded.
- Listing all screening thresholds and specifies separate screening thresholds for residential/sensitive land uses and other less sensitive uses, where appropriate.

A number of Hazardous Industry Planning Advisory Papers (HIPAPS) and other guidelines have been published progressively by the Department to assist stakeholders in implementing the process. The HIPAPs potentially applicable to the SIMTA proposal are listed below.

### 3.10.2 HIPAP NO. 6 - GUIDELINES FOR HAZARD ANALYSIS

In assessing development proposals (for new facilities and substantial modifications to existing ones) and existing plants, the emphasis is on preventing or minimising major hazardous incidents on-site, such as fire and explosion or the release of significant quantities of toxic or biologically harmful chemicals, that could result in significant off-site effects.

The assessment of the suitability of a site to accommodate an existing or proposed development of a potentially hazardous nature must be based on consideration of:

- The nature and quantities of hazardous materials stored and processed on the site.
- The type of plant and equipment in use.
- The adequacy of proposed technical, operational and organisational safeguards.
- The surrounding land uses or likely future land uses.
- The interactions of these factors.

This information is incorporated into the hazard analysis. The objective of hazard analysis is to develop a comprehensive understanding of the hazards and risks associated with an operation or facility and of the adequacy of safeguards. Without such analysis it is difficult to be confident that design and operation can be carried out with an adequate level of safety.

HIPAP No. 6 provides guidance on the general approach recommended for hazard analysis and details the requirements for reports to be submitted to government authorities.

### 3.10.3 HIPAP NO. 10 - LAND USE SAFETY PLANNING

Land use safety planning is essentially a mechanism for dealing with actual or potential conflicts between sources of risk, such as potentially hazardous industrial developments, and surrounding land uses. These guidelines focus on the land use safety implications of industrial hazards, in particular those arising from loss of containment of hazardous materials leading to fires, explosions and toxic releases.

They provide advice to planning authorities and other stakeholders in relation to strategic land use safety planning and development assessment and control. They also discuss risk criteria for land use safety planning and cover emergency planning in the context of land use safety.

## 3.11 RURAL FIRES ACT 1997

The *Rural Fires Act 1997* (RF Act) is administered by the Rural Fire Service (RFS). The objects of the RF Act are to provide:

- For the prevention, mitigation and suppression of bush and other fires in local government areas, (or parts of areas) and other parts of the State constituted as rural fire districts.
- For the co-ordination of bushfire fighting and bushfire prevention throughout the State.
- For the protection of persons from injury or death, and property from damage, arising from fires.
- For the protection of the environment by requiring certain activities referred to above.

- To be carried out having regard to the principles of ecologically sustainable development.

Section 100B of the RF Act grants the RFS the authority to assess proposed development within bushfire prone land. Development of the SIMTA site should therefore be undertaken in accordance with *Planning for Bushfire Protection*, in order to meet the requirements of the RFS and obtain their approval.

### 3.11.1 PLANNING FOR BUSHFIRE PROTECTION

*Planning for Bushfire Protection* (NSW RFS, 2006) provides the necessary planning considerations when developing areas for residential use in residential, rural residential, rural and urban areas when development sites are in close proximity to areas likely to be affected by bushfire events and replaces *Planning for Bushfire Protection* (2001).

The requirements of the document are discussed in further detail in Section 6.2.

**Table 4: Summary of legislative triggers and requirements**

Legislation	Activity	Trigger	Threshold	Requirement
<i>Work Health and Safety Act 2011</i>	Construction – asbestos	Asbestos present on site	Any amount of asbestos	Compliance with: <ul style="list-style-type: none"> <li>- Work Health and Safety Regulation 2011</li> <li>- Model Code of Practice – How to Manage and Control Asbestos in the Workplace</li> <li>- Model Code of Practice – How to Safely Remove Asbestos</li> </ul>
	Operation – storage	Storage of dangerous goods in quantities greater than the exemption limits of the ADG Code	Exemption limits of the ADG Code	Compliance with: <ul style="list-style-type: none"> <li>- Work Health and Safety Regulation 2011</li> <li>- Code of Practice for the safe storage and handling of dangerous goods</li> <li>- Model Code of Practice – Labelling Hazardous Workplace Chemicals</li> </ul>
<i>International Maritime Dangerous Goods (IMDG) Code 2012</i>	Operation – storage, packing, labelling and transport to and from SIMTA site	Packing, labelling, separation of dangerous goods not in accordance with the prevailing IMDG Code	Exemption limits of the IMDG Code	Compliance with: <ul style="list-style-type: none"> <li>- IMDG Code 2012</li> <li>- Sydney Ports Corporation <i>Dangerous Goods Management Guidelines</i> (2013)</li> </ul>
<i>Dangerous Goods (Road and Rail Transport) Act 2008</i>	Transport of goods to and from SIMTA site	Dangerous goods transported in quantities above the exemption limits of the ADG Code	Exemption limits of the ADG Code	Compliance with: <ul style="list-style-type: none"> <li>- Dangerous Goods (Road and Rail Transport) Regulation 2009</li> <li>- ADG Code</li> </ul>
<i>Environmental Planning and Assessment Act 1979 &amp; Rural Fires Act 1997</i>	Staged development applications	Development in bushfire prone area	-	Compliance with Planning for Bushfire Protection
SEPP 33	Staged development applications	Potentially hazardous and potentially offensive industries to be undertaken on site	Definition of potentially hazardous or offensive development as contained in Applying SEPP 33	Undertake a PHA in accordance with compliance with: <ul style="list-style-type: none"> <li>- SEPP33</li> <li>- Applying SEPP 33 (Consultation Draft)</li> <li>- HIPAPs</li> </ul>



## 4 SCOPE OF ASSESSMENT

### 4.1 CONSTRUCTION RISK

Hazards associated with construction of the SIMTA proposal will be managed through the Hazard and Operability Study (HAZOP), which will be undertaken as part of the detailed design. Construction will be undertaken in accordance with the *Work Health and Safety Act 2011*. Asbestos has been identified on the SIMTA site and will require the adoption of management practices to meet the standards required by the WHS Act and its regulations. The available information on asbestos at the SIMTA site has been reviewed and is summarised below.

#### 4.1.1 ASBESTOS

Asbestos is a naturally occurring fibrous mineral that has typically been used for its insulation and fire resistant properties as well as roof and wall cladding for building structures. Over time bonded fibres may be worn down and released to the environment. Breathing in asbestos fibres in high concentrations and/or exposure over a long period of time has the potential to cause asbestosis, lung cancer and mesothelioma. Demolition of structures and excavation or disturbance of soil containing asbestos has the potential to cause the fibres to become airborne, thereby posing a risk to human health.

A survey for hazardous building materials was undertaken by AGC Woodward-Clyde Pty Ltd and Hibbs & Associates Pty Ltd in October 1999 (AGC/H&B survey) on the DNSDC (i.e. the SIMTA site). From this survey an asbestos register was developed for the site. Asbestos was found to be present in approximately 15 per cent of all buildings on the SIMTA site. An audit of the site and register was undertaken by Hibbs & Associates Pty Ltd in 2002 (H&A audit) along with a qualitative assessment of the risk to occupants of the buildings in which asbestos was identified.

The qualitative risk assessment used the following condition priority ratings to rank the hazard posed by the asbestos in its current location and with continued building use:

- Condition Priority A1: Immediate Elevated Risk Level: Friable material, which due to its present condition and location, presents an immediate health risk. Immediate control measures are required and the area containing this material should be isolated from personnel. Abatement of this particular hazard is strongly recommended at the earliest practicable time.
- Condition Priority A2: Potential Elevated Risk Level: Damaged or unstable material that if disturbed is likely to present an immediate health risk, with the likelihood that contamination may spread to other areas. Control measures to stabilise this material should be initiated immediately, with formal abatement of the hazard being considered.
- Condition Priority A3: Low Risk Requiring Minor Maintenance: Non-friable or stable material that has some minor areas of damage requiring remedial action or is likely to be subject to damage or to degrade due to environmental conditions. It is recommended that maintenance work be performed to stabilise and repair damaged areas. Controls must be implemented to protect these materials from further damage or degrading factors.
- Condition Priority A4: Negligible Risk Under Present Conditions: Non-friable or stable material, which is unlikely to present a risk to health unless damaged, tooled, cut, sanded, abraded or machined. It is recommended that these materials be maintained in good order. Reassessment of the priority rating will be required if planned works are likely to have an impact on these materials.

Figure 4 shows the location of existing assets on the DNSDC site. Only those assets that were identified in the AGC/H&B survey as containing asbestos were audited in 2002.

Table 5 summarises the findings of the 1999 survey and 2002 audit.

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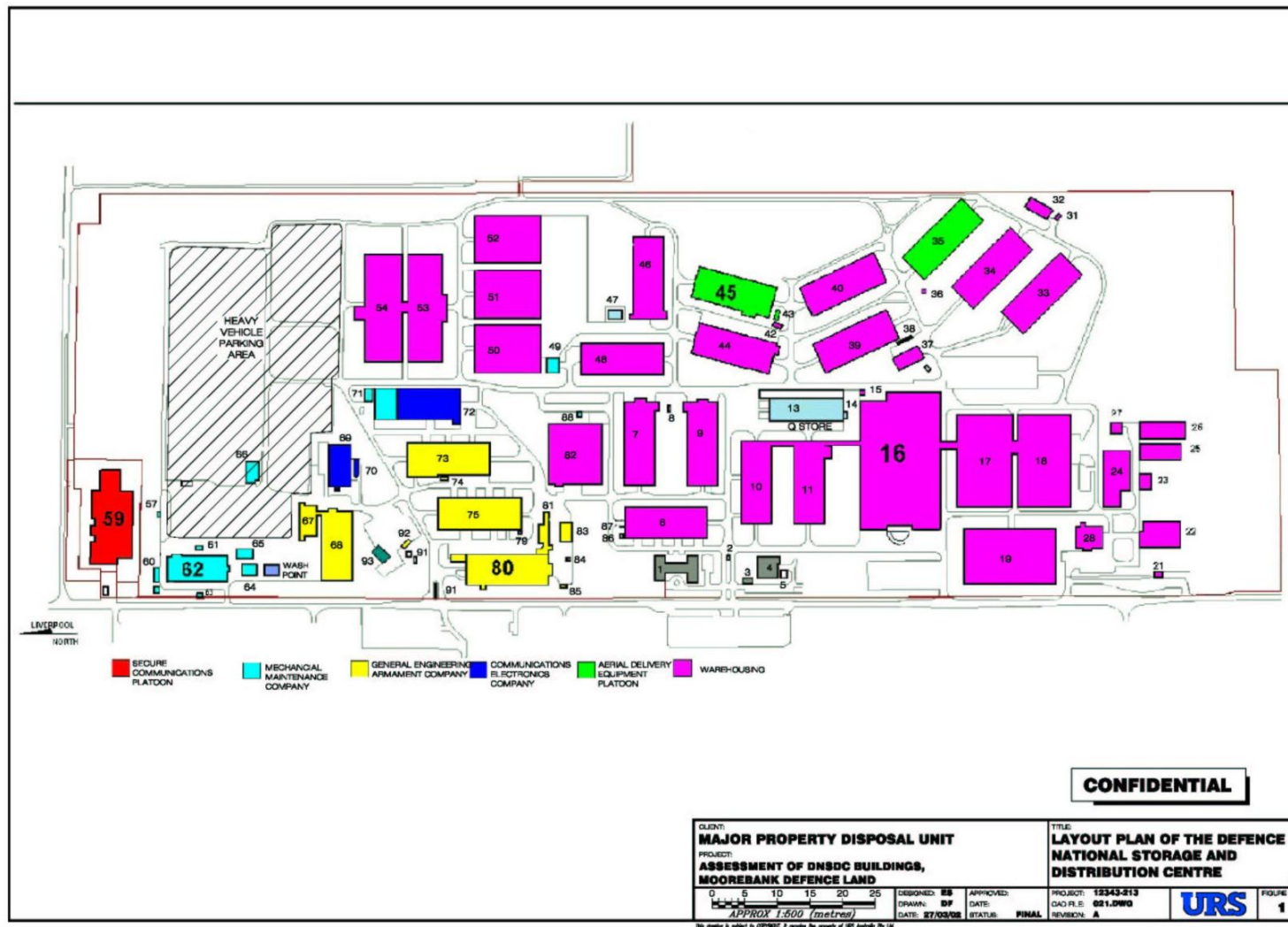


Figure 4: SIMTA site plan as occupied by DNSDC

**Table 5 Summary of asbestos material identified on SIMTA site**

Asset No.	Location	Description	Condition Priority Rating
1	DNSDC Headquarters – ground floor A/C plantroom	- Asbestos millboard debris on top of air handling unit - Supply air duct electrical heater banks lined with asbestos millboard	A1
	Ground Floor - Air-Conditioning Plant Room/Boiler Room	- Moulded asbestos cement product - Boiler flue	A4
	First floor female toilets	- Asbestos woven material – Flexible connector associated with extraction for unit	A4
2	Gatehouse – internal-external soffit	Flat AC sheet - Ceiling and eaves lining	A4
20	Offices/cold store – building exterior	- Electrical backing board	A4
		- Thick flat AC sheeting as sunshades above window	
		- Moulded asbestos to service pit	
32	Stores – Store 32M03	Possible flat AC sheets as awning lining	A4
43	Office/lunch room – building exterior	Eaves	A4
49	Battery store and offices – toilet and washroom ceiling	Ceiling lining	A4
62	Mechanics workshop – main workshop	Space heaters – gasket/seal	A4
63	Compressor room – Electrical switchboard	Electrical backing board	A4
67	Warehouse - No. 11 compressor room	Supply air duct electrical heater banks lined with asbestos millboard	A1
	Firing range – fire door	Possible asbestos fire door core	A4
	Phosphate line – space heater	Gasket/flange joint	A4
	Welding and power coat storage area	Gasket – plate seal	A4
	Drying oven for powder coats	Gasket – plate seal	A4
	Storage Area (11) – Flammable liquids portable	Asbestos rope door seal	A4
	No. 11 Compressor room	Spare/disused asbestos gasket & flange joint gaskets	A4
80	Warehouse – west side	Asbestos pipe lagging debris on top of GE/electrical office and ASM GE/ARMT office	A1
	Main workshop – 4 Dravo space heaters	Gasket/seal	A4
91	Offices and toilet block – building interior	Ceiling lining – flat AC sheet	A4
	Building exterior	Eaves lining – flat AC sheet	A4

Demolition of the structures listed above has the potential to release asbestos fibres into the atmosphere, causing harm to human health. Management of this risk is discussed in Section 3.2.

## 4.2 OPERATIONAL RISK

### 4.2.1 DANGEROUS GOODS STORAGE AND TRANSPORT

Tenants of the SIMTA proposal are currently unknown; hence the quantities and types of goods transported to, and stored on, the site cannot currently be quantified, nor the possibility of transport or storage of dangerous goods at the SIMTA site excluded. Dangerous goods pose a risk to the health and safety of employees and contractors working on the site and the community surrounding the site, if not handled correctly as they may be explosive, flammable, combustible, spontaneously combustible, oxidising, water-reactive, toxic or corrosive. The transport and storage of dangerous goods is recognised as a high risk activity involving heavy vehicles on the public road and rail network (ADG Code, NTC, 2007).

The handling of chemicals would constitute the highest exposure to dangerous goods. In 2011 to 2012, Port Botany handled 178,161 TEU of containerised chemicals (135,588 TEU import and 42,573 TEU export). This equates to 8.75 per cent of total Port Botany throughput (2.036 million TEU).

Of these goods, the most prominent imported commodities were:

- Plastic materials and artificial resins – 54,346 TEU.
- Oils, perfumes and cleaning materials – 29,221 TEU.
- Chemical materials and products – 16,927 TEU.

The most prominent exports were:

- Plastic material and artificial resins – 15,347 TEU.
- Chemical materials and products – 6,630 TEU.
- Medicine and pharmaceutical products – 5,515 TEU.
- Oils, perfumes and cleaning materials – 4,931 TEU.

In the Preliminary Hazard Analysis for the Port Botany Expansion Environmental Impact Statement 2003 (SPC/URS) an analysis of dangerous goods trade passing through Port Botany showed that approximately 96 per cent of containers carried no dangerous goods. Accordingly, only 4.0 per cent of containers did carry dangerous goods.

Applying that same percentage to 2011-12 trade would equate to approximately 80,000 TEU. Road transport accounts for 86 per cent of the land transport task, hence the volume of dangerous goods in containers transported by rail is relatively low (11,000 TEU in total). As SIMTA represents only one of several existing and proposed intermodal terminals within the Sydney region the number of containers carrying dangerous goods would be lower.

Requests to Sydney Ports Corporation for detailed breakdown of the dangerous goods classes and quantities currently handled through Port Botany have been declined. Operational risk screening, based on information that is publicly available and the SIMTA proposal concept is outlined in Section 6, below.

## 4.2.2 BUSHFIRE

Bushfire risk is defined as the chance of a bushfire igniting, spreading and causing damage to life and property, and assets of value (including ecological assets) to the community (Bushfire Coordinating Committee, 2008). Factors contributing to bushfire risk include vegetation type, slope, aspect, weather conditions and proximity of hazards to assets (the further away an asset is located from a bushfire hazard, the less likely it is to be damaged or destroyed by the bushfire).

Bushfire risk is most likely to arise from the large area of native vegetation contained within the Commonwealth land, adjoining the proposal site to the east and south. This vegetation is mapped as *Vegetation Category 1* bushfire prone land (Liverpool City Council 2010) (Figure 5).

Bushfire prone land is land that can support a bushfire or is likely to be subject to bushfire attack: Sections of the eastern, southern and western margins of the SIMTA proposal are mapped as buffers of this same *Vegetation Category 1* bush fire prone land.



Figure 5: Bushfire Prone Land map (Liverpool City Council, 2010)

## 5 CONSTRUCTION RISK ASSESSMENT

Demolition of the structures listed in Section 4.1, above, should be undertaken in accordance with the *National Code of Practice for the Safe Removal of Asbestos* (NOHSC, 2005).

Excavation or disturbance of those areas of the SIMTA site and rail corridor where the potential for asbestos to be present within the soil has been identified should also be managed in accordance with the code of practice.

Prior to commencement of construction, a risk assessment must be undertaken by a competent person of the SIMTA site prior to removal of any asbestos material from site. In accordance with the *Model Code of Practice – How to Manage and Control Asbestos in the Workplace* (Safe Work Australia, 2011), the assessment must comprise review and summation of all available information for the SIMTA site, including the:

- Asbestos risk assessment/risk register.
- Asbestos management plan.
- Implementation of the asbestos management plan to date.
- A confirmation of controls to be implemented where construction works will impact on asbestos materials.

An asbestos management plan will be developed for the SIMTA proposal containing a risk assessment undertaken in accordance with *Code of Practice for the Management and Control of Asbestos in the Workplace* (NOHSC, 2005).

Where the management plan recommends the removal of asbestos from site all works will be undertaken in accordance with the *Model Code of Practice – How to Manage and Control Asbestos in the Workplace* (Safe Work Australia, 2011), including the development of an asbestos removal control plan and an emergency plan.

## 6 OPERATIONAL RISK SCREENING

As described in *Applying SEPP 33* (DoP, 2008) the first stage of determining the SEPP 33 procedural requirements, and in particular to determine if a PHA is required is to undertake the screening tests, such as dangerous goods quantity/ distance thresholds. Hazardous materials are substances falling within the classification of the Australian Code for Transportation of Dangerous Goods by Road and Rail (Dangerous Goods Code).

Industries or projects determined to be hazardous or potentially hazardous require the preparation of a Preliminary Hazard Analysis (PHA) in accordance with clause 12 of SEPP 33.

### 6.1 RISK SCREENING

A range of information is required to effectively apply the risk screening method described in *Applying SEPP 33* in order to determine if the development is potentially hazardous, including:

- Details of all dangerous goods and otherwise hazardous materials involved in the proposed development - include raw materials, intermediates, and products.
- Dangerous goods classifications (including all subsidiary classes) for all Dangerous Goods held on site.
- Quantities of dangerous goods and otherwise hazardous materials involved in the proposed development.
- Hazardous materials and their quantities.
- Distance from the boundary for each hazardous substance.
- Weekly and annual number of deliveries (and the quantities) of dangerous goods and otherwise hazardous materials to and from the facility.
- Site layout plan showing proposed development and any existing development on site.
- Local layout plan showing immediate neighbours and their activities.
- A locality plan showing the nearest residential property.

As data regarding the classes and volumes of dangerous goods and hazardous materials could not be obtained from Sydney Ports, the risk screening process under SEPP 33 could not be undertaken.

The next approach was to identify the dangerous goods classes, for which there are screening thresholds, which can be excluded on the basis of the following factors:

- a Dangerous goods classes on the South Sydney Freight Line (SSFL):** the majority of goods transported to, and stored at, the SIMTA site would be transported along the SSFL. Therefore, the types of goods stored at the site are restricted to those that are permissible on the SSFL.

The potential classes of dangerous goods being transported along the SSFL were identified from the information provided in the approved hazard and risk assessment undertaken for the SSFL (Parsons and Brinkerhoff, 2006). The analysis was based on dangerous goods carried on the Country South Line, which were determined to be representative of those carried on the SSFL. These included Classes 2.1, 2.3, 3, 5.1, 5.2, 6.1, and 8.

- b Dangerous goods that cannot be transported in containers:** all cargo entering or leaving the SIMTA site will be either packed in shipping containers and exported to an



overseas destination or imported in shipping containers from an overseas origin. Where the risk screening threshold for a class dangerous goods is above the quantity of what could be transported by container (> 20 tonnes) and/or require to be transported in a gas tanker, this has been excluded.

- c Storage on site:** some dangerous goods thresholds apply only if the material is to be stored on site. As the transfer period at the SIMTA site will be no longer than 3 days, this was not considered to apply.
- d Operational decisions:** the project proponent has made a decision that these classes of goods will not be transported to or warehoused on site.

The dangerous good classes for which there are screening thresholds (and trigger the requirement for a PHA) are presented in Table 6. The classes and threshold quantities to be excluded from the SIMTA site, and the rationale for exclusion are also presented. The dangerous goods likely to be transported to and from the SIMTA site in quantities greater than the screening threshold are shaded in grey.

**Table 6: Dangerous goods classes to be excluded**

Class	Description	Screening threshold quantity	Description of screening test	To be excluded	Rationale for exclusion
1.2	Explosives - Substances and articles which have a projection hazard but not a mass explosion hazard	5 t	or within 100m residential area	Yes	Not carried on the SSFL
1.3	Explosives - Substances and articles which have a fire hazard and either a minor blast hazard or a minor projection hazard or both	10 t	or within 100m residential area	Yes	Not carried on the SSFL
2.1	Gases - Flammable gases	LPG Only – not including automotive and retail outlets			
		10 t or 16 m <sup>3</sup>	above ground	Yes	Not containerised/ Not to be stored on site
		40 t or 64 m <sup>3</sup>	underground	Yes	Not containerised/ Not to be stored on site
2.3	Gases – Toxic gases	5 t	anhydrous ammonia	Yes	Operational decision
		1 t	Chlorine & sulphur dioxide in liquefied gas containers <100 kg	Yes	Not containerised
		2.5 t	Chlorine & sulphur dioxide in liquefied gas containers <100 kg	Yes	Not containerised
		100 kg	Liquefied gas	Yes	Not containerised/ Not to be stored on site
		100 kg	other poisonous gases	Yes	Operational decision
4.1	Flammable solids	5 t	-	Yes	Not carried on the SSFL



Class	Description	Screening threshold quantity	Description of screening test	To be excluded	Rationale for exclusion
4.2	Substances liable to spontaneous combustion	1 t	-	Yes	Not carried on the SSFL
4.3	Substances that in contact with water emit flammable gases	1 t	-	Yes	Not carried on the SSFL
5.1	Oxidising agents	25 t	Ammonium nitrate	Yes	Operational decision – likely minimal demand within freight catchment
		5t	Any class other than dry chlorine (and only if chlorine stored at a dedicated pool shop)	No	
5.2	Organic peroxides	10 t	-	No	
6.1	Toxic substances	0.5 t	Packing group I	No	
		2.5 t	Packing groups II & III	No	
6.2	Infectious substances	0.5 t	Includes clinical waste	Yes	Not carried on the SSFL
7	Radioactive Material	All	-	Yes	Not carried on the SSFL
8	Corrosive substances	5 t	Packing group I	No	
		25 t	Packing group II	Yes	Not containerised
		50 t	Packing group III	Yes	Not containerised

As can be seen from Table 6, five classes of dangerous goods may be transported to or from the SIMTA site in quantities greater than the screening thresholds identified in *Applying SEPP 33*. Should these classes of goods be received or stored at the SIMTA site in quantities at or above the screening levels identified, further analysis of the potential risks associated with handling the substances would be undertaken. It is noted that the screening procedure set out in *Applying SEPP 33* is conservative and does not automatically lead to a conclusion that the development is hazardous (DoP, 2008). Standards for design and operational management development to mitigate risk associated with handling the dangerous goods at the SIMTA site are outlined in Table 8, below.

## 6.1.1 HAZARD IDENTIFICATION

A **hazard** is anything or situation with a potential for causing damage to people, property or the biophysical environment. **Hazard identification** was undertaken based on a review of the proposed activities at the intermodal terminal. The process was undertaken referencing similar studies undertaken for port and container operations. Consideration of the hazards associated with each of the dangerous goods classes was also carried out.

In identifying hazards, operational and organisational safeguards designed to prevent or mitigate the effects of hazardous incidents have also been taken into consideration.

### Methods of release

The proposed operations on the site were reviewed with reference to similar port and container operations to identify hazards. Consideration was given to the location of activities involving dangerous goods. These were identified to be:

- Shuttle freight train unloading/ loading via gantry crane.
- Loading and unloading of container trucks via gantry crane.
- Storage of containers in the stack.
- Transportation on-site via container trucks and rail cars.

Potential on-site methods of release are shown in Table 8. The standards and guidelines that would advise facility design and operating procedures to mitigate risks and hazards associated with the future stages of the SIMTA proposal are also noted.

The other cause that may lead to release is fire. The SIMTA site will be protected from the impact of fires originating from off-site by a 15 metre asset protection zone fire (refer to Section 6.2). The design and installation of on-site fire hydrants will be in compliance with AS 2419.1-2005 *Fire hydrant installations - System design, installation and commissioning*.

Off-site methods of release include rail and road transport of goods to and from the intermodal facility. All cargo entering or leaving the SIMTA site will be either packed in shipping containers and exported to an overseas destination or imported in shipping containers from an overseas origin. The carriage of dangerous goods by sea is governed by the International Maritime Organisation (IMO) and regulations pertaining to the International Convention for the Safety of Life at Sea (SOLAS) are implemented by shipping lines, port authorities as well as warehousing and transport operators engaged in international shipping. All dangerous goods handled through the SIMTA will be subject to these regulations.

### Materials

Materials likely to be handled on site, which could potentially be involved in an accident and the potential scenarios are shown in Table 7.

**Table 7 – Potential hazard scenarios**

Material class	Description	Potential Scenario
3	Flammable liquids	Fire or explosion
5.1	Oxidising substances	Fire or explosion
5.2	Organic peroxides	Fire or explosion
6.1	Toxic Materials	Fire involving this material

Material class	Description	Potential Scenario
8	Corrosives	Spill causing injury

As discussed in Section 6.1, it is unknown whether these substances will be handled at the SIMTA site in quantities that exceed the screening threshold. Regardless of the quantities of goods handled a Dangerous Goods Management Plan would be developed for the SIMTA site and workers at the intermodal terminal would be inducted on the management of containers carrying dangerous goods, their identification and separation requirements in accordance with the relevant Australian standards and NSW WorkCover guidelines (see Table 8).

## 6.1.2 HAZARD MITIGATION AND MANGAMENT

Based on the dangerous goods classes to be loaded, unloaded or temporarily held over (no longer than 3 days) at the SIMTA site and the potential hazards there are no specific design controls, requirements or constraints that apply to the concept design stage, other than a 15 m asset protection zone (discussed further in Section 6.3.2 below).

The design requirements and safeguards to manage safety and pollution control will be addressed in the detailed design for each stage of development. Many of the controls and safeguards will be through the application of management standards and/or procedures.

All dangerous goods entering or leaving the SIMTA site would be governed by the International Maritime Organisation (IMO) and regulations pertaining to the International Convention for the Safety of Life at Sea (SOLAS).

Emergency response and incident management protocols for the construction and operation of SIMTA proposal would be developed collaboratively with the construction contractor and site operator and in consultation with the NSW police force, NSW Fire Brigade, NSW Rural Fire Service and the Ambulance Service of NSW. Emergency response and incident management protocols will cover the following types of emergency or incident:

- Workplace health and safety.
- On-site spills or leaks.
- Off-site discharges.
- Hazardous materials/dangerous goods.
- Flooding.
- Bushfire.
- Derailment.
- Container fall.
- Road incident on Moorebank Avenue.

Table 8 identifies the management standards and guidelines that would be used to inform facility and warehouse design and the operational management strategies that will be developed to mitigate potential hazards at the SIMTA site.

**Table 8: Hazard scenarios and consequences associated with the activities and facilities**

Activity/Equipment	Cause/Comment	Effect	Consequence Range	Management standards and guidelines
Train/truck unloading via crane gantry.	Uncontrolled container caused by operator error. Impact with another container, gantry or train.	Failure to contain dangerous goods during unloading. Fire. Pressure explosion.	Death. Serious injury. Loss of operating time. Increase cost.	AS 2550.1 Cranes hoists and winches. Work Cover NSW Bridge and Gantry Crane Drivers: A guide for power crane operators (1997). Work Cover NSW Dogging Guide (2003). Work Cover NSW Rigging Guide (1995).
Stacking containers via crane gantry.	Unstable container load. Impact with other containers during operation. Lower containers misaligned.	Failure to contain dangerous goods during stacking operations. Fire. Pressure explosion.	Death. Serious injury. Loss of operating time. Increase cost.	AS 2550.1 Cranes hoists and winches
	Crane gantry failure. Traffic due to vehicle accident; impact on other vehicles. Misalignment with truck due to truck movement and/or operator error.	Failure to contain dangerous goods during truck loading operations. Fire. Pressure explosion.	Death. Serious injury. Loss of operating time. Increase cost.	Work Cover NSW Bridge and Gantry Crane Drivers: A guide for power crane operators (1997). Work Cover NSW Dogging Guide (2003). Work Cover NSW Rigging Guide (1995).
Loading of rail cars and trucks by crane gantry.	Failure to control container attributable to operator error. Impact with gantry or other container.	Failure to contain dangerous goods during loading. Fire. Pressure explosion.	Death. Serious injury. Loss of operating time. Increase cost.	Work Cover NSW Bridge and Gantry Crane Drivers: A guide for power crane operators (1997) AS1940:2004 The storage and handling of flammable and combustible liquids AS2022:2003 Anhydrous ammonia -

Activity/Equipment	Cause/Comment	Effect	Consequence Range	Management standards and guidelines
				<p>Storage and handling</p> <p>AS2187.1-1998 Explosives – Storage, transport and use – Storage</p> <p>AS2507-1998 The storage and handling of agricultural and veterinary chemicals</p> <p>AS2714-2008 The storage and handling of organic peroxides</p> <p>AS2927:2001 Storage &amp; handling of liquefied chlorine gas</p> <p>AS3780-2008 The storage &amp; handling of Corrosive Substances</p> <p>AS4326-2008 The storage and handling of oxidising agents</p> <p>AS4452:1997 The storage and handling of toxic substances</p>
On-site transport via rail cars & trucks.	Traffic due to truck accident.	<p>Failure to contain dangerous goods during on-site transport.</p> <p>Fire.</p> <p>Pressure explosion.</p>	<p>Death.</p> <p>Serious injury.</p> <p>Loss of operating time.</p> <p>Increase cost.</p>	Work Cover NSW Traffic Management in Warehousing (2009)
On-site vehicle movements.	Fuel leaks, brakes overheating and/or electrical faults.	<p>Vehicle fire.</p> <p>Fire.</p>	<p>Death.</p> <p>Serious injury.</p> <p>Loss of operating time.</p> <p>Increase cost.</p>	Work Cover NSW Traffic Management in Warehousing (2009).

## 6.2 BUSHFIRE PROTECTION

Bushfire risk is defined as the chance of a bushfire igniting, spreading and causing damage to life and property, and assets of value (including ecological assets) to the community (Bushfire Coordinating Committee, 2008). Factors contributing to bushfire risk include vegetation type, slope, aspect, weather conditions and proximity of hazards to assets (the further away an asset is located from a bushfire hazard, the less likely it is to be damaged or destroyed by a bushfire).

For the SIMTA proposal, bushfire risk is most likely to arise from the large area of native vegetation contained on the Commonwealth land, adjoining the SIMTA site to the east and south. This vegetation is mapped as 'Vegetation Category 1' bushfire prone land (Liverpool City Council 2010). Bushfire prone land is land that can support a bushfire or is likely to be subject to bushfire attack. Sections of the eastern, southern and western margins of the SIMTA proposal are mapped as buffers of this same 'Vegetation Category 1' bush fire prone land.

As per *Planning for Bushfire Protection* (PBP) (NSW RFS, 2006b), factors that may contribute to bush fire risk of the SIMTA proposal include:

- 1 **Vegetation Type:** vegetation at the SIMTA site is dominated by large expanses of mown grasses (around 38 per cent of the landcover extent); scattered trees (around 12 per cent of the landcover extent) and limited landscaped garden beds. Woodland classified as 'dry sclerophyll forest' under PBP adjoins the site to the south and south-east.

Connectivity between vegetation within the SIMTA site and adjoining bushland is limited by an unsealed service road and cleared areas, thereby reducing the potential spread of a fire to, and from, the site. Vegetation occurring to the west of the site is separated by the dual carriageway of Moorebank Avenue.

- 2 **Slope:** the slope of vegetated land affects the rate of spread of a bushfire; fires burn faster uphill than downhill. Risk is generally greater to assets located upslope from a hazard than those located down slope. The SIMTA site is located upslope from the woodland located to the east of the site and upslope from dry sclerophyll woodland located to the south of the site. As the degree of slope surrounding the proposal site is low, the contribution of slope to bushfire risk is considered unlikely to be significant.
- 3 **Aspect:** The aspect of vegetated land in part contributes to the moisture content of vegetation, which in turn may influence the intensity and rate of spread of a bushfire. Generally, slopes with a north to north-westerly aspect are associated with the greatest bushfire risk, as they typically receive hot dry winds. Vegetated land to the east and south of the SIMTA proposal have easterly and southerly aspects respectively. Additionally, as the degree of slopes surrounding the proposal site are generally low, the contribution of aspect to bushfire risk is unlikely to be significant.
- 4 **Proximity of hazards to assets:** infrastructure assets that are proposed as part of the SIMTA proposal would include the intermodal terminal, additional distribution warehouses, rail link, sealed roads, water supply and sewerage systems and high and low voltage power transmission lines.

Planning for Bushfire Protection (PBP) (NSW RFS, 2006b) outlines planning considerations when developing areas for residential use in residential, rural residential, rural and urban areas when development sites are in close proximity to areas likely to be affected by bushfire events.

PBP does not provide explicit planning considerations for industrial developments, rather industrial development should comply with the broad aims and objectives of PBP (Shackleton C 2010, pers. comms. 29 July). The aim of PBP is to "*use the NSW development assessment system to provide for the protection of human life (including fire fighters) and to minimise*

*impacts on property from the threat of bushfire, while having due regard to development potential, on-site amenity and protection of the environment*". The specific objectives, as stated in PBP, are to:

- 5 Afford occupants of any building adequate protection from exposure to a bushfire.
- 6 Provide for a defensible space to be located around buildings.
- 7 Provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent direct flame contact and material ignition.
- 8 Ensure that safe operational access and egress for emergency service personnel and residents is available.
- 9 Provide for ongoing management and maintenance of bushfire protection measures, including fuel loads in the asset protection zone (APZ).
- 10 Ensure that utility services are adequate to meet the needs of fire fighters (and others assisting in bushfire fighting).

Of these objectives, the Rural Fire Service Development Assessment and Planning division (Shackleton C 2010, pers. comms. 29 July) identified that objectives 1, 4, and 6 are of particular relevance to industrial development.

To comply with the aims of PBP, an asset protection zone of 15 m has been identified within the SIMTA site boundary. This has been calculated based on the vegetation of dry sclerophyll forests to the south and south-east of the site and a minimal slope. Land used within the asset protection zone will include internal roads, bio retention stormwater swales and car parking and the area would be maintained with a minimal fuel load. Vegetation used in landscaping on the southern and eastern boundaries will be selected in accordance with Appendix 5 - Bush Fire Provisions - Landscaping and Property Maintenance of PBP. An APZ is not proposed for the rail link as buildings would not be permanently located within the easement. The width of the easement, between 20 and 30 m would be maintained with minimal fuel loads; no clearing outside of this easement for the purposes of fire risk reduction is proposed and no additional impacts on flora and fauna would occur as a result of maintenance operations.

Figure 2 shows the extent of the APZ and the easement for the rail link.

Buildings will be designed to comply with AS 3959:2009, as adopted by the Building Code of Australia (BCA) (2010), which details construction requirements for buildings in bushfire prone areas. In particular, buildings will be designed and positioned to resist burning embers, radiant heat and flame contact, through measures such as constructing buildings of non-combustible materials, and the installation of screens over any windows and gutter guards on roofs.

Objectives 4 and 6 would be met through the ongoing consultation with the RFS, fire-fighters and personnel accessing the SIMTA site and rail corridor areas during both construction and operation.

The SIMTA proposal is assessed as having a low bushfire risk. The SIMTA proposal is more likely to be at risk from bushfire rather than representing a potential ignition source for a bushfire. In order to keep risks associated with bushfires to a low level:

- Management strategies would be adopted to maintain low availability of ground fuel around all site boundaries and within the APZ.
- Maintenance of weeds and potential fuel sources within the area cleared for the rail link would be undertaken.
- Consultation with RailCorp, Defence and the Rural Fire Service would be maintained to facilitate hazard reduction activities in proximity to the SIMTA site and rail link.



- Bushfire response strategies would be included within SIMTA's Emergency Response Plan for the site.

The combination of these measures would minimise bushfire risk for the SIMTA proposal.

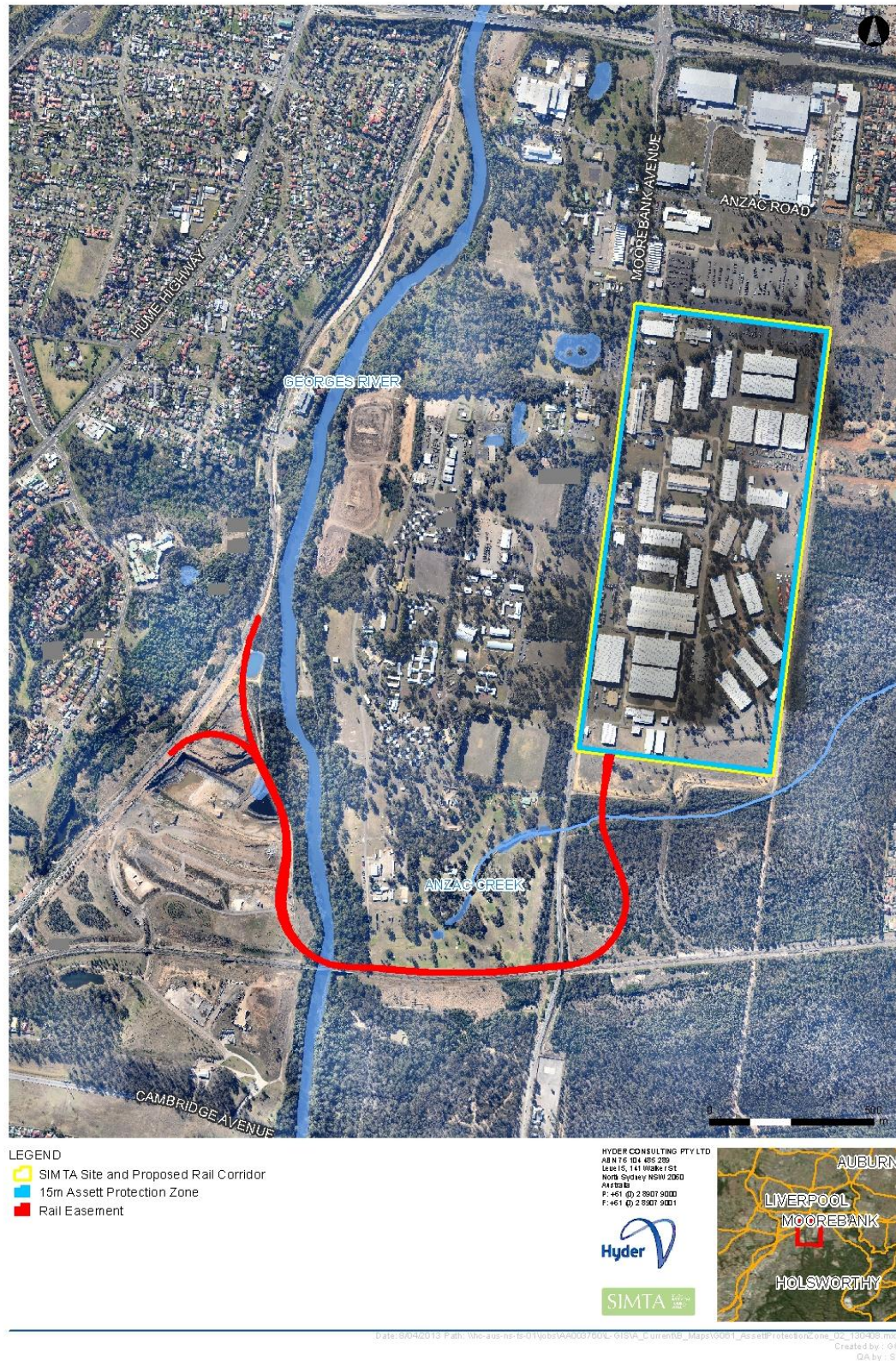


Figure 2: Asset protection zone



## 6.3 CONCLUSIONS AND RECOMMENDATIONS

### 6.3.1 HAZARDOUS GOODS MANAGEMENT

A preliminary hazard assessment will be undertaken for each stage of development, as required by SEPP No. 33. Once the level of risk has been identified the aim will be to reduce the risk to as low as reasonably possible through the application of specific operational management procedures that will form part of a framework for managing risks. Should unacceptable levels of risk be identified during the PHA, SIMTA will require potential tenants to demonstrate measures to reduce the risk to an acceptable level prior to acceptance of tenancy.

SIMTA will require all tenants to disclose the type and quantity of goods entering the SIMTA site prior to award of tenancy. Prior to commencement of a lease on the SIMTA site, all tenants that will handle dangerous goods will be required to sign on to SIMTA's Hazard and Risk Management Plan and the Emergency Response Plan for the site. These plans will be reviewed regularly and updated as goods entering the site change with the tenancies. The requirements in the *Code of Practice for storage and handling of dangerous goods* (Work Cover NSW, 2005) will be adopted in these plans as a minimum.

In line with international shipping legislation, it will be a requirement that all dangerous goods to be imported or exported through the facility must be notified in advance. The method of notification is to be determined under a Site Operational Management Plan. In line with local and international requirements, it is envisaged that terminal staff will be required to have successfully completed dangerous goods training in accordance with IMDG Code Chapter 1.3.

Each person is to receive training in the contents of dangerous goods provisions commensurate with their roles and responsibilities. Training is to be provided for and records maintained in accordance with the appropriate competent authority (WorkCover NSW).

### 6.3.2 BUSHFIRE MANAGEMENT

SIMTA has committed to addressing the key objectives identified by the RFS, during future design stages, in accordance with the following principles:

#### Afford occupants of any building adequate protection from exposure to a bushfire

Buildings will be designed to comply with AS 3959:2009, as adopted by the *Building Code of Australia* (BCA) (2010), which details construction requirements for buildings in bushfire prone areas. In particular, buildings will be designed and positioned to resist burning embers, radiant heat and flame contact, through measures such as constructing buildings of non-combustible materials, installation of screens over any windows, gutter guards on roofs.

#### Ensure safe operational access and egress for emergency service personnel and residents

The design of roads (internal and perimeter) will be such that:

- Fire fighters and their vehicles and equipment are provided with safe all-weather access to structures.
- Public road widths allow safe access for fire fighters while occupants are evacuating an area.
- The capacity of road surfaces and bridges is sufficient to carry fully loaded fire fighting vehicles.
- Site occupants are to be afforded safe exits from the site under various fire scenarios.

## Provide for ongoing management and maintenance of bushfire protection measures, including fuel loads in asset protection zones (APZs)

Due to the proximity of Bushfire Prone Land to the proposal site (Figure 5), an APZ will be established and maintained, most likely along the eastern, southern and western boundaries of the site. Exact locations and widths of APZs for the proposed development may be defined by the Rural Fire Service Development Assessment and Planning division upon finalisation of development plans.

## Ensure that utility services are adequate to meet the needs of fire fighters

With regard to utilities, consideration should be given to reticulated water supplies being easily accessible and located at regular intervals, that the location of electricity services limits the risk of ignition of surrounding bushland or the fabric of buildings and that the location of gas services will not increase the risk of ignition of surrounding bushland or the fabric of buildings.

A Bushfire Management Plan will also be developed for both the construction and operational phases of the SIMTA proposal. The following strategies may be adopted by the plan:

- Performance of hot works to be managed so as to minimise risk of bushfire ignition.
- No hot works to be undertaken during the declared bushfire season (typically 1 September to 30 March) on days declared to be total fire ban days by the Rural Fire Service in the absence of specific controls or approval mechanisms.
- During hot works as fire cart is to be on hand and a cleared zone established with no ground fuel present.

# 7

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