

APPENDIX F

SEPP 33 Hazard Report



St George Hospital

SEPP 33 Risk Screening Assessment - Stage 2 Redevelopment



St George Hospital

SEPP 33 Risk Screening Assessment - Stage 2 Redevelopment

Client: Health Infrastructure

ABN: 39600377397

Prepared by

AECOM Australia Pty Ltd

Level 21, 420 George Street, Sydney NSW 2000, PO Box Q410, QVB Post Office NSW 1230, Australia

T +61 2 8934 0000 F +61 2 8934 0001 www.aecom.com

ABN 20 093 846 925

11-Dec-2014

Job No.: 60322800

AECOM in Australia and New Zealand is certified to the latest version of ISO9001, ISO14001, AS/NZS4801 and OHSAS18001.

© AECOM Australia Pty Ltd (AECOM). All rights reserved.

AECOM has prepared this document for the sole use of the Client and for a specific purpose, each as expressly stated in the document. No other party should rely on this document without the prior written consent of AECOM. AECOM undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document. This document has been prepared based on the Client's description of its requirements and AECOM's experience, having regard to assumptions that AECOM can reasonably be expected to make in accordance with sound professional principles. AECOM may also have relied upon information provided by the Client and other third parties to prepare this document, some of which may not have been verified. Subject to the above conditions, this document may be transmitted, reproduced or disseminated only in its entirety.

Quality Information

Document St George Hospital
 Ref 60322800
 Date 11-Dec-2014
 Prepared by Nabeel Darwish / Jessica Tang
 Reviewed by Kevin Blackie

Revision History



Revision	Revision Date	Details	Authorised	
			Name/Position	Signature
A	28-Oct-2014	For Client Issue	Will Marshall Principal Fire & Risk Engineer	
B	04-Nov-2014	Final Issue	Will Marshall Principal Fire & Risk Engineer	
C	11-Dec-2014	Revised to include stakeholders comment	Will Marshall Principal Fire & Risk Engineer	

Table of Contents

Executive Summary	i
1.0 Introduction	1
1.1 Overview	1
1.2 Project Stakeholders	1
1.3 Design Team Documentation	1
2.0 Description of the SGH Development	2
3.0 Transport of Dangerous Goods	3
4.0 Storage of Dangerous Goods – SEPP 33 Screening Analysis	4
5.0 Conclusion	7
Appendix A	
DG Consultant Correspondence	A

Executive Summary

As part of the St George Hospital (SGH) Stage 2 Redevelopment, a new Acute Services Building is proposed to be constructed above the existing Emergency Department in Kogarah, NSW. This State Environmental Planning Policy No. 33 (SEPP 33) risk screening assessment has been prepared to address the requirements of the St George Hospital Stage 2 Redevelopment Environmental Impact Statement (EIS).

An initial risk screening process outlined in the Applying SEPP 33 Hazardous and Offensive Development Application Guidelines documentation is utilised to determine whether the nature of the development is considered potentially hazardous and 'potentially offensive'. It is understood, based on information from stakeholders that the nature and quantities of dangerous goods proposed to be stored in the Stage 2 Redevelopment will not be excessive or culminate to adversely impact the existing facilities and the overall site. Notwithstanding the nature of the proposed storage, a SEPP 33 risk screening assessment has been undertaken for the entire SGH site.

The proposed storage, usage and management quantities of hazardous materials at the SGH site are outlined in Section 4.0. In summary, these materials consist of various Class 2.1, 2.2, 3 PG II, 3 PG III and C1 products and have been assessed against the threshold limits outlined in SEPP 33. As the threshold limits are not exceeded, no further measures are required to be implemented to manage hazards and risks associated with the storage.

The storage of equipment and associated radiation hazards related to medical imaging, including x-rays, nuclear scans and radiation oncology are not included in the list of hazardous materials provided by the Dangerous Goods Consultant shown in Appendix A. These materials are assumed to comply with relevant Australian Standards.

Based on the Dangerous Goods currently stored on site (information provided by All Areas Dangerous Goods Consultants), there are no exceedances of the threshold limits under the provisions of SEPP 33. The completion of the SEPP 33 screening assessment shows that the St George Hospital Stage 2 development is not considered to be potentially hazardous based on the dangerous goods stored and therefore no further assessment¹ is required.

¹ Refers to additional assessments described under the policy (SEPP 33) and not specific assessment that may be required by other regulations such as the Work Health and Safety Regulation 2011.

1.0 Introduction

1.1 Overview

The application of the State Environmental Planning Policy No. 33 (SEPP 33) Hazardous and Offensive Development under the NSW Planning legislation presents a systematic approach for consent authorities to planning and assessing proposals for potentially hazardous and offensive developments. The policy assesses whether proposals can proceed based on several factors including suitability of location, development and operational safety and pollution control.

An initial risk screening process outlined in the Applying SEPP 33 Hazardous and Offensive Development Application Guidelines documentation is utilised to determine whether the nature of the development is considered 'potentially hazardous' or 'potentially offensive'. The risk screening is a quantitative assessment based on threshold limits for storage and transportation. The outcomes of the risk screening determine if further assessment is required, such as a preliminary hazard analysis (PHA). Dangerous Goods for combustible liquids, Classes 2.2, 7 and 9 are not included as part of the screening process under SEPP 33, and have therefore been excluded from this assessment. The SESLHDs Dangerous Goods consultant (All Areas Dangerous Goods Consultants) has confirmed that the transport quantities for dangerous goods currently on site are below the quantity thresholds (Appendix A).

It is understood based on information from stakeholders that the nature and quantities of dangerous goods proposed to be stored in the Stage 2 Redevelopment will not be excessive or culminate to adversely impact the existing facilities and the overall site. Based on a conservative approach, a SEPP 33 risk screening assessment has been undertaken for the entire SGH site.

1.2 Project Stakeholders

Table 1 Project Stakeholders

Name	Company	Role	Contact Details
Gavin Thompson	Aurora Projects Pty Ltd	Project Manager	02 9021 8279
John Jackson	All Areas Dangerous Goods Consultants	SESLHDs Dangerous Goods Consultant	02 9437 5302
Jessica Tang	AECOM Australia Pty Ltd	Risk Engineer	02 8934 0361

1.3 Design Team Documentation

1. Plan of Premises Dangerous Goods by All Areas Dangerous Goods Consultants, Ref. Drawing StG14, Dated 03 December 2013.
2. Notification of Dangerous Goods on Premises Form by All Areas Dangerous Goods Consultants, Ref. FDG01, Sent 12 October 2014.
3. Correspondence with Dangerous Goods Consultant, outlined in Appendix A.

2.0 Description of the SGH Development

St. George Hospital is an existing healthcare facility site located on Gray Street, Kogarah NSW. A new Acute Services Building is proposed for the Stage 2 works. A SEPP 33 screening analysis for the site is required to be completed to support a Development Application for the proposed Stage 2 Redevelopment.

The Stage 2 Redevelopment Acute Services building is proposed to consist of departments including the ICU, HDU, operating theatres, cardiac cath labs, IPU and SSD. It is understood that the proposed departments in the Stage 2 Redevelopment will share and utilise the dangerous goods stored in the existing storage depots (Figure 1). Therefore the nature and quantities of dangerous goods proposed in the new facilities of the Stage 2 Redevelopment is not expected to increase or adversely impact on the maximum aggregate quantities of existing dangerous goods currently stored onsite.

The site subject to this screening analysis is shown in Figure 1.

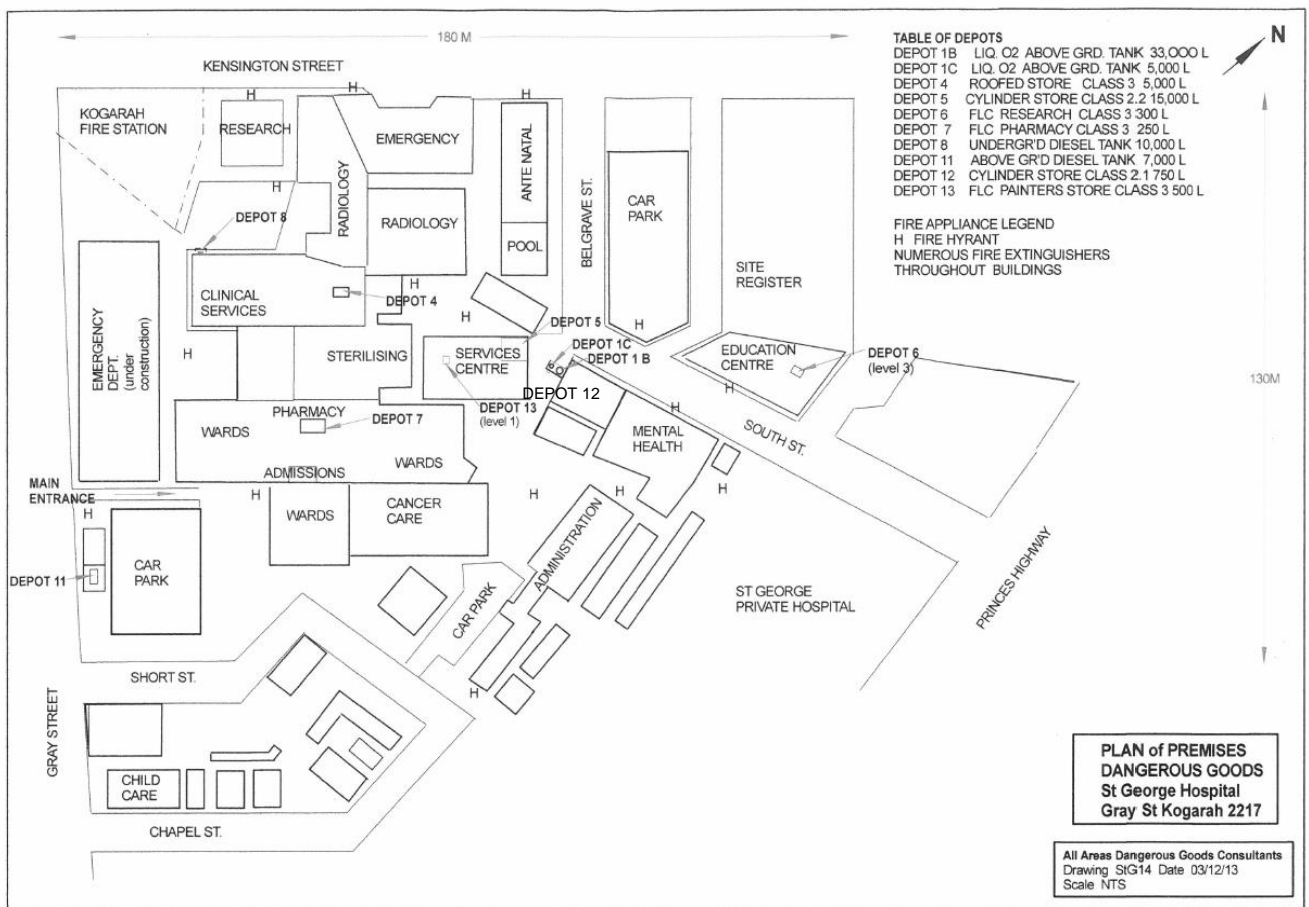


Figure 1 Site Plan showing storage of Dangerous Goods

3.0 Transport of Dangerous Goods

SEPP 33 identifies transport criteria for Dangerous Goods subject to a SEP 33 screening analysis. The SESLHDs Dangerous Goods consultant (All Areas Dangerous Goods Consultants) has confirmed that the transport quantities required to sustain the Dangerous Goods storage on site are below the transport criteria for SEPP 33 screening and no further quantitative assessment is undertaken. This correspondence in relation to the transport of dangerous goods at SGH is provided in Appendix A.

4.0 Storage of Dangerous Goods – SEPP 33 Screening Analysis

To support the daily operations of SGH, a number of Dangerous Goods are required to be stored onsite. These are detailed in Appendix A and distributed around the facility as shown in Figure 1.

A SEPP 33 screening analysis has been completed to assess the stored quantities of Dangerous Goods onsite against maximum storage thresholds identified in the NSW Department of Planning Guidelines. It is understood that the nature and quantities of dangerous goods proposed in the new facilities of the Stage 2 Redevelopment will not increase or adversely impact on the maximum aggregate quantities of existing dangerous goods currently stored onsite.

The following analysis demonstrates that the maximum storage capacities of DG storage depots at SGH are within the SEPP 33 thresholds.

Table 2 St. George Hospital SEPP 33 Screening Assessment

DG Store Location	Store Description	Contents	DG Class & Packing Group	Specific Gravity	Max. On-Site Storage Capacity (L)	Max. On-Site Storage in tonnes*	SEPP 33 Threshold	Screening Method ('Apply SEPP 33', DP&I 2011)	Exceeds SEPP 33 Threshold? (Y/N)
Depot 1B & 1C	Above Ground Tanks	Liquid Oxygen	2.2	1.1044	33,000 + 5,000 = 38,000	42	N/A (Not Applicable)	N/A**	N/A
Depot 4	Roofed Store	Ethanol	3 PG II	0.787	5,000	3.95	> 5 tonnes	Table 1	No
Depot 5	Cylinder Store	Medical Air	2.2	1.1044	15,000	16.8	N/A**	N/A**	N/A
		Argon	2.2	1.38					
		Nitrogen	2.2	0.9669					
		Nitrous Oxide	2.2	1.037					
		Medical Oxygen	2.2	1.1044					
		Carbon Dioxide	2.2	1.5189					
Depot 6	Flammable Liquids Cabinet	Ethanol	3 PG II	0.787	300	0.25	> 5 tonnes	Table 1	No
Depot 7	Flammable Liquids Cabinet	Ethanol	3 PG II	0.787	250	0.2	> 5 tonnes	Table 1	No
Depot 8	Underground Tank	Diesel	C1	0.96	10,000	9.6	N/A**	N/A**	N/A
Depot 11	Above Ground Tank	Diesel	C1	0.96	7,000	6.72	N/A**	N/A**	N/A
Depot 12	Cylinder Store	Acetylene	2.1	0.90	750	0.09	> 0.1 tonnes	Table 1	No
		Hydrogen	2.1	0.0696					
		Propane i.e. LPG	2.1 (LPG)	1.5219		0.42	> 10 tonnes	Table 3	No

DG Store Location	Store Description	Contents	DG Class & Packing Group	Specific Gravity	Max. On-Site Storage Capacity (L)	Max. On-Site Storage in tonnes*	SEPP 33 Threshold	Screening Method ('Apply SEPP 33', DP&I 2011)	Exceeds SEPP 33 Threshold? (Y/N)
Depot 13	Flammable Liquids Cabinet	Ethanol	3 PG II	0.787	500	0.42	> 5 tonnes	Table 1	No
		Turpentine	3 PG III	0.871					

* Note 1: The maximum quantities in tonnes are based on the specific gravity properties and apportioned volumes of the dangerous goods outlined in the DG audit manifest provided by All Areas Dangerous Goods Consultants (FDG01, 2013).

**Note 2: Class 2.2 non-flammable, inert gases or Class C1 & C2 combustible liquids are excluded from the SEPP 33 risk screening threshold assessment.

5.0 Conclusion

This risk screening process has been undertaken for the storage only of Dangerous Goods at St. George Hospital, Gray Street, Kogarah NSW. Based on the Dangerous Goods currently stored on site (values provided by All Areas Dangerous Goods Consultants), there are no exceedances of the threshold limits under the provisions of SEPP 33. The completion of the SEPP 33 screening assessment shows that the St George Hospital Stage 2 Redevelopment is not considered to be potentially hazardous based on the dangerous goods stored and therefore no further assessment under the SEPP 33 policy is required.

Appendix A

DG Consultant Correspondence

Appendix A DG Consultant Correspondence

Transport Quantity Verification



All Areas Dangerous Goods Consultants

Wholly Owned by Beechtree Services Pty Ltd
7/35 Gillies St, Wollstonecraft NSW 2065
Phone 0407 940 405

10th October 2014

Ms. Jessica Tang
AECOM

Dear Jessica,

As per our discussions of 10th October 2014, please find attached a Dangerous Goods register and Dangerous Goods sketch for the St George Hospital site at Gray St, Kogarah.

These documents are an accurate statement of the amounts and location of Dangerous Goods on the site and as such provide a relevant and accurate basis for a SEP 33 screening analysis.

Furthermore the transport amounts to sustain these quantities of Dangerous Goods are below the transport criteria for SEPP 33 screening.

Signed,

John Jackson
Member 009 Australasian Institute of Dangerous Goods Consultants
St George Hospital DG consultant.

DG Storage Quantities

Notification of Dangerous Goods on Premises Form St George Hospital, Gray St, Kogarah, 2217

FDG01

This Dangerous Goods Table is a result of a DG audit in November 2013. Former DG Depots 1, 1A, 2, 9 and 10 are deleted..

Identifier	Type of storage location or Process	Depot Class	Maximum Storage Capacity
Depot 1B	Above Ground Tank	2.2	33,000 Litres

UN Number	Proper Shipping Name	Class	PG (I,II,III)	Product or Common Name	Haz Chem Symbol	Typical Quantity	Unit. Eg. L,kg,m ³
1073	Oxygen, Refrigerated Liquid	2.2	II	Liquid Oxygen	2PE	20,000	L

Identifier	Type of storage location or Process	Depot Class	Maximum Storage Capacity
Depot 1C	Above Ground Tank	2.2	5,000 Litres

UN Number	Proper Shipping Name	Class	PG (I,II,III)	Product or Common Name	Haz Chem Symbol	Typical Quantity	Unit. Eg. L,kg,m ³
1073	Oxygen, Refrigerated Liquid	2.2		Liquid Oxygen	2PE	2,000	L

Identifier	Type of storage location or Process	Depot Class	Maximum Storage Capacity
Depot 4	Roofed Store	3	5,000 Litres

UN Number	Proper Shipping Name	Class	PG (I,II,III)	Product or Common Name	Haz Chem Symbol	Typical Quantity	Unit. Eg. L,kg,m ³
1170	Ethanol	3	II	Ethanol	3YE	1,000	L

Clinical Services-Flammable Liquid Store

Identifier	Type of storage location or Process	Depot Class	Maximum Storage Capacity
Depot 5	Cylinder Store	2.2	15,000 L

UN Number	Proper Shipping Name	Class	PG (I,II,III)	Product or Common Name	Haz Chem Symbol	Typical Quantity	Unit. Eg. L,kg,m ³
1002	Air, Compressed	2.2		Air	2T	2,000	L
1006	Argon, Compressed	2.2		Argon	2T	500	L
1066	Nitrogen, Compressed	2.2		Nitrogen	2T	2,000	L
1070	Nitrous Oxide	2.2		Nitrous Oxide	2P	2,000	L
1072	Oxygen, Compressed	2.2		Oxygen	2S	2,000	L
1013	Carbon Dioxide	2.2		Carbon Dioxide	2RE	1,000	L

Gas Cylinder Store-Services Building

Identifier	Type of storage location or Process	Depot Class	Maximum Storage Capacity
Depot 6	Flammable Liquid Cabinets	3	300 L

UN Number	Proper Shipping Name	Class	PG (I,II,III)	Product or Common Name	Haz Chem Symbol	Typical Quantity	Unit. Eg. L,kg,m ³
1170	Ethanol	3	II	Ethanol	3YE	200	L

Research and Education Building-level 3.

Identifier	Type of storage location or Process	Depot Class	Maximum Storage Capacity
Depot 7	Flammable Liquid Cabinets	3	250 L

UN Number	Proper Shipping Name	Class	PG (I,II,III)	Product or Common Name	Haz Chem Symbol	Typical Quantity	Unit. Eg. L,kg,m ³
1170	Ethanol	3	II	Ethanol	3YE	50	L

Pharmacy

Identifier	Type of storage location or Process	Depot Class	Maximum Storage Capacity
Depot 8	Underground Tank	C1	10,000 L

UN Number	Proper Shipping Name	Class	PG (I,II,III)	Product or Common Name	Haz Chem Symbol	Typical Quantity	Unit. Eg. L,kg,m ³
	Diesel	C1		Diesel		6,000	L

South West of Clinical Services

Identifier	Type of storage location or Process	Depot Class	Maximum Storage Capacity
Depot 11	Above Ground Tank	C1	7,000 L

UN Number	Proper Shipping Name	Class	PG (I,II,III)	Product or Common Name	Haz Chem Symbol	Typical Quantity	Unit. Eg. L,kg,m ³
	Diesel	C1		Diesel		6,000	L

Identifier	Type of storage location or Process	Depot Class	Maximum Storage Capacity
Depot 12	Cylinder Store	2.1	750 L

UN Number	Proper Shipping Name	Class	PG (I,II,III)	Product or Common Name	Haz Chem Symbol	Typical Quantity	Unit. Eg. L,kg,m ³
1001	Acetylene,Dissolved	2.1		Acetylene	2SE	50	L
1049	Hydrogen,Compressed	2.1		Hydrogen	2SE	300	L
1978	Propane	2.1		Propane	2WE	200	L

Identifier	Type of storage location or Process	Depot Class	Maximum Storage Capacity
Depot 13	Flammable Liquids Cabinets	3	500 Litres

UN Number	Proper Shipping Name	Class	PG (I,II,III)	Product or Common Name	Haz Chem Symbol	Typical Quantity	Unit. Eg. L,kg,m ³
1170	Ethanol	3	II	Alcohol	3YE	100	L
1300	Turpentine Substitute	3	III	Turpentine	3YE	80	L

Painters Room-Services Centre