

Ref: RCE-19006

12 April 2019

APP Property and Infrastructure Specialists
Level 7, 116 Miller Street
North Sydney NSW 2060

Attention: Mr. Michael Terrett

RE: Qantas Group Flight Training Centre - DGHS Consultancy Services

Dear Michael,

Thank you for your inquiry regarding the application of *State Environmental Planning Policy No.33, Hazardous and Offensive Developments* (SEPP33), to the site at 297 King Street Mascot, Qantas Flight Training Centre.

The analysis conducted for the Qantas site, to be developed by APP Property and Infrastructure Specialists (APP), has been assessed for the application of SEPP33, based on the proposed storage of Dangerous Goods (DG) at the facility. The NSW Department of Planning and Environment (DPE) has published a guideline to assist regulators in determining the application of SEPP33, "Applying SEPP33" (Ref.2), which contains threshold levels of DGs above which SEPP33 would apply. The analysis conducted in the study reported in the SEPP33 analysis (attached) has identified that the threshold levels of Dangerous Goods, proposed for storage at the Qantas site, do not exceed the threshold levels listed in "Applying SEPP33". Further, the transport of DGs does not exceed the threshold levels published in "Applying SEPP33" and there are no "offensive" operations at the site. Hence, it is concluded that SEPP33 would not apply to the proposed site.

If you have any queries regarding the assessment in the attached Consultants Advice Notice, please call me on the mobile (0411 659 309)

Yours faithfully,

RiskCon Engineering Pty Ltd

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CONSULTANTS ADVICE NOTICE

Project:	Qantas Flight Training Centre, 297 King Street, Mascot	Ref No.:	RCE-19006
From:	Steve Sylvester	Date:	12 April 2019
		Issue:	Revision 1
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	Attention	Company	Email/Fax
To:	Michael Terrett	APP Property and Infrastructure Specialists	michael.terrett@app.com.au

RE: SEPP33 Analysis – Qantas Group Flight Training Centre

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1. INTRODUCTION

1.1. Background

Qantas Airways Ltd proposes to develop a flight training centre at Sydney Kingsford Smith Airport at 297 King Street, Mascot, NSW. The project is for the construction of a new Flight Training Centre and ancillary uses to replace the existing facility on the Qantas Jetbase that will be impacted by RMS' Sydney Gateway Project, however it will also house a small quantity of dangerous goods of varying classification. A number of aerosols will be held on site (Class 2.1), non-flammable gases (Class 2.2) flammable liquids (Class 3), toxic substances (Class 6.1), corrosive substances (Class 8) and miscellaneous goods (Class 9), all of which are classified as Dangerous Goods under the provisions of the Australian Dangerous Goods Code (or ADG, Ref.1). These products may be subject to SEPP33, based on the proposed quantity of DGs stored.

RiskCon Engineering (RiskCon) has been commissioned by Qantas Airways Ltd (Qantas) to prepare this report in accordance with the technical requirements of the Secretary's Environmental Assessment Requirements (SEARs), and in support of the **SSD 10154** for the development of a new flight training centre at 297 King Street, Mascot

1.2. Objectives

The objectives of the study are to:

- Determine whether SEPP33 applies to the proposed flight training centre at Mascot, NSW, based on the quantity of Dangerous Goods proposed for storage at the sites; and
- Report on the findings of the study in support of the Development Application.

1.3. Scope

The scope of work is for a SEPP33 assessment of the quantities of Dangerous Goods (DGs) proposed for storage in nominated locations within the facility operated by Qantas to determine whether the SEPP33 policy applies to the facility. In addition, a review of the quantity of vehicle movements as a result of the DGs being stored will be assessed to determine whether additional traffic assessment is required. The assessment does not include any other sites, or the preparation of any other planning studies should they be required.

2. METHODOLOGY

The methodology used in this assessment is as follows;

- Review the types and proposed quantities of DGs to be stored at the development site;
- Compare the quantities of DGs to the threshold quantities listed in "Applying SEPP33 – Hazardous and Offensive Development" (Ref.2, see extract at **Table 4.2**) to identify whether the storage location or quantity triggers SEPP33;
- Review the likely vehicular movements as a result of DGs being stored and compared against the applicable thresholds detailed in Applying SEPP33 (Ref.2); and
- Report on the findings of the SEPP33 assessment.

3. BRIEF DESCRIPTION

3.1. Site Regional Location and Surrounding Land Uses.

The site is located at 297 King Street, Mascot and comprises land known as Lots 2-5 DP 234489, Lot 1 DP 202747, Lot B DP 164829 and Lot 133 DP 659434. The site is identified in **Figure 3.1**.

Key features of the site are as follows:

- The site is approximately 5.417ha and is an irregular shape. It is approximately 240m in length and maintains a variable width of between approximately 321m in the northern portion of the site and approximately 93m along the King Street frontage (refer to Figure 1).
- The site possesses a relatively level slope across the site. An open Sydney Water drainage channel bisects the northern portion of the site in an east-west direction. There are some isolated changes in level immediately adjacent to this channel. A Site Survey Plan accompanies the application which details the topographic characteristics of the site.
- Multiple mature Plane Trees are scattered throughout the site. A variety of native and exotic trees and vegetation also exist around the perimeter of the site which help screen the site from surrounding uses.
- Site improvements include at-grade car parking for Qantas staff, an industrial shed to store spare aviation parts, a substation, a disused gatehouse, a Sydney Water Asset with two driveways over it, the Qantas catering facility and Qantas tri-generation plant.
- The site forms part of a larger land holding under the ownership of Qantas that generally extends between Qantas Drive to the west, Ewan Street to the south, Coward Street to the north, with the Qantas "Corporate Campus" fronting Bourke Road.
- Vehicular access to the site from the local road network is available from King Street. The site has intra-campus connections along the northern boundary in the form of two connecting driveways in the north-eastern and north-western corner of the site along the northern boundary which link it to the broader Mascot Campus.
- The site is located within the Bayside LGA.

Key features of the locality are:

- **North:** The site is bounded to the north low scale industrial development, beyond which is Coward Street. Further north of the site is the Mascot Town Centre which is characterised by transport-oriented development including high density mixed-use development focussed around the Mascot Train Station.
- **East:** The site is bordered to the east by commercial development including a newly completed Travelodge hotel which includes a commercial car park. Additional commercial development to the east includes the Ibis Hotel and Pullman Sydney Airport fronting O'Riordan Street.
- **South:** The site is bounded to the south by King Street, beyond which is Qantas owned at-grade car parking and other industrial uses. Further south is the Botany Freight Rail Line and Qantas Drive beyond which is the Domestic Terminal at Sydney Airport.

- **West:** The site is bordered to the west by the Botany Freight Rail Line and Qantas Drive, beyond which lies Sydney Kingsford Smith Airport and the Qantas Jetbase (location of the current Flight Training Centre).



Figure 3.1: Location of the Proposed Qantas Flight Training Centre

3.2. Qantas Flight Training Centre

3.2.1. Brief Description of Site Layout and Operations

Safety is Qantas' first priority. The flight training centre is a key pillar of this value. The facility enables pilots and flight crews to undertake periodic testing to meet regulatory requirements by simulating both aircraft and emergency procedural environments. The Project seeks consent for the construction and operation of a new flight training centre, and associated ancillary uses including a multi-deck car park. The Project is comprised of the following uses:

- An emergency procedures hall that contains;
 - cabin evacuation emergency trainers,
 - an evacuation training pool,
 - door trainers,
 - fire trainers,

- slide descent towers,
 - security room,
 - aviation medicine training and equipment rooms.
- A flight training centre that contains:
 - a flight training hall with 14 bays that will house aircraft simulators,
 - integrated procedures training rooms, computer rooms, a maintenance workshop, storerooms, multiple de-briefing and briefing rooms, pilot's lounge and a shared lounge.
- Teaching Space that contains:
 - Training rooms,
 - Classrooms and two computer-based exam rooms.
- Office Space
 - Office space for staff and associated shared amenities including multiple small, medium and large meeting rooms, think tank rooms, informal meeting spaces, a video room and lunch/tea room.
- Ancillary spaces including the reception area at the ground floor, toilets, roof plant and vertical circulation. The external ground floor layout will include a loading dock, at-grade car parking for approximately 35 spaces and a bus drop-off zone at the northern site boundary.
- The proposed multi-deck car park will be located to the north-east of the flight training centre and adjacent to the existing Qantas catering facility and tri-generation plant. Vehicle access to the car park will be provided via King Street, Kent Road and from Qantas Drive via the existing catering bridge.

3.2.2. Dangerous Goods Proposed for Storage at the Site

The maximum quantities of differing classes of DGs that are to be assessed for storage in the facility are shown in **Table 3.1**. **Table 3.2** provides a condensed summary of **Table 3.1**.

Table 3.1: DG Classes and Max. Quantities Stored – Qantas Flight Training Centre

UN No.	Proper Chemical Name	Class	PG	Qty (L/kg)	Notes
Gases (Class 2.1)					
1950	Aerosols	2.1	-	9 L	The mass of LPG in aerosols is assumed to be around 50% of the total aerosol volume (very conservative)
1950	Aerosols	2.1	-	0.5 L	
1950	Aerosols	2.1	-	3 L	
1950	Aerosols	2.2	-	3 L	
1950	Aerosols	2.2	-	5 L	
TOTAL CLASS 2.1 (Aerosols)				20.5 L	Around 11kg LPG
Gases (Class 2.2)					
1066	Nitrogen, compressed	2.2	-	100 L	WC cylinders
TOTAL CLASS 2.2				100 L	2x "G" size cylinders
Flammable Liquids (Class 3)					
1263	Paint	3	II	20 L	
1300	Turpentine Substitute	3	III	0.2 L	
1866	Resin Solution	3	II	5 L	.
1987	Alcohols	3	II	5 L	
1993	Flammable Liquids NOS	3	II	0.5 L	
1219	Isopropyl Alcohol	3	II	40 L	2 x 20 L drums
1193	Ethyl Methyl Ketone	3	II	20 L	
2319	Terpene Hydrocarbons	3	III	3 L	
TOTAL CLASS 3 PGII&III				94 L	
Toxic Substances (Class 6)					
2810	Toxic Liquid Organic NOS	6.1	II	20 L	
TOTAL CLASS 6.1 PGII				20 L	
Corrosive Substances (Class 8)					
3263	Corrosive Solid Basic Org.	8	II	3 L	
TOTAL CLASS 8 PGII				3 L	
Miscellaneous DG (Class 9)					
3082	Env. Haz. Substance	9	III	400 L	2 x 200 L drums
3077	Env. Haz. Substance	9	III	3 L	
TOTAL CLASS 9 PGIII				403 L	

Table 3.2: DG Storage Summary

Classification	Quantity
Class 2.1 (Aerosols)	20.5L (11 kg)
Class 2.2 (Non-flammable/non-toxic gas)	100 L *
Class 3 (Flammable Liquids)	94 L
Class 6.1 (Toxic Substances)	20 L
Class 8 (Corrosive Substances)	3 L
Class 9 (Miscellaneous DG)	403 L

* WC – water capacity of cylinders

4. ASSESSMENT OF THE APPLICATION OF SEPP33 TO THE QANTAS FLIGHT TRAINING CENTRE

4.1. Qantas Flight Training Storage and SEPP33 Application

The proposed Qantas flight training centre will be developed predominantly for a range of aircraft training purposes, but will also store and handle a number of Dangerous Goods (as listed in the Australian Dangerous Goods Code, Ref.1) including flammable gases (cylinders & aerosols), flammable liquids and toxic substances.

Table 3.1 lists the maximum quantity of DGs proposed for storage in the various depots at the site. “Applying SEPP33” guideline (Ref.2) provides details on the application of Figures or Tables from the same document to determine the applied screening threshold. It shows that of each of the relevant classes:

- For Class 2.1 – Table 3 from the guideline is used;
- Class 2.2 gases are not subject to SEPP33 (threshold values not included in Table 3)
- for Class 3 - Figure 9 from the guideline is used;
- for Class 6.1 - Table 3 from the guideline is used;
- for Class 8 - Table 3 from the guideline is used
- Class 9 materials are not subject to SEPP33 (threshold values not included in Table 3)

Table 3 from “Applying SEPP33 - Hazardous and Offensive Developments” has been extracted and is included at **Table 4.2**.

The assessment conducted for the Qantas flight training centre has been performed in tabular format. **Table 4.1** provides a detailed list of stored material (DG) quantities versus the permissible SEPP33 threshold levels.

Table 4.1: SEPP33 Assessment Application

CLASS	DESCRIPTION	PG	QUANTITY STORED (MAX)	SEPP33 THRESHOLD	SEPP33 APPLIES (Y/N)
2.1	Aerosols	-	20.5 L (0.0205 m ³)	16 m ³	N
2.2	Gas Cylinders	-	Not subject to SEPP33		
3	Flammable Liquids	II	94 L (0.076 tonne)	Distance based only over 8 tonnes	N
6.1	Toxic Substances	II	20 L (0.015 tonnes)	5 tonnes	N
8	Corrosives	II	3 L (4.2 kg or 0.042 tonnes)	25 tonnes	N
9	Miscellaneous	III	Not subject to SEPP33		

It can be seen from **Table 4.1** that for aerosols, gas cylinders, flammable liquids, toxic substances, corrosives and miscellaneous DG's the threshold levels are not exceeded and thus SEPP33 does not apply.

Table 4.2: General Screening Threshold Quantities - Extracted from “Applying SEPP33” (Ref.2)

Table 3: General Screening Threshold Quantities

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

Note: The classes used are those referred to in the Australian Dangerous Goods Code and are explained in Appendix 7.

4.2. SEPP33 DG Transport Assessment

In addition to the storage of Dangerous Goods, SEPP33 also requires the review of the transport of DGs to the site. **Table 4.3**, extracted from "Applying SEPP33"(Ref.2), lists the threshold levels for transport of each class of DG. The table also includes the number of vehicle movements for each of the DGs transported to and from the Qantas flight training centre, based on quantities stored.

Table 4.3: Transport Screening Thresholds (Extracted from "Applying SEPP33" (Ref.2))

Applying SEPP 33 | January 2011

Table 2: Transportation Screening Thresholds

Class	Vehicle Movements		Minimum quantity*		Vehicle Movements		Max Load (Tonnes)
	Cumulative Annual	Peak or Weekly	per load (tonne)		Cumulative Annual	Peak Weekly	
1	see note	see note	see note		Not Transported		
2.1	>500	>30	2	5	50	1	0.005
2.3	>100	>6	1	2	Not transported		
3PGI	>500	>30	1	1	Not transported		
3PGII	>750	>45	3	10	50	1 [#]	0.01
3PGIII	>1000	>60	10	no limit	50	1 [#]	0.01
4.1	>200	>12	1	2	Not Transported		
4.2	>100	>3	2	5	Not transported		
4.3	>200	>12	5	10	Not Transported		
5	>500	>30	2	5	Not Transported		
6.1	all	all	1	3	20	0.5	0.005
6.2	see note	see note	see note		Not transported		
7	see note	see note	see note		Not Transported		
8	>500	>30	2	5	6	0.1 [#]	0.003
9	>1000	>60	no limit		Not Subject to SEPP33		

* If quantities are below this level, the potential risk is unlikely to be significant unless the number of traffic movements is high

Note: All loads will be transported as packages no bulk transport

It can be seen from **Table 4.3** that the number of vehicle movements, involving DGs, does not exceed the threshold limits listed in "Applying SEPP33".

Based on the transport analysis, SEPP33 would not apply to the Qantas Flight Training Centre.

4.3. SEPP33 Assessment – Offensive Operations

SEPP33 also contains a requirement for review of operations that may cause offense in the form of odour, environmental impact, nuisance (noise), etc. An indication of whether “offensiveness” may occur at the facility is whether an Environmental Protection Authority (EPA) licence is required for specific operations at the site. A review of the flight training centre operations indicates that there are no processes that would result in the manufacture, production or transfer of materials in a form that may result in the release of bulk materials at the site or that could result in odour generation or, for example, excessive noise. An EPA licence would not be required for this site.

The total quantity of chemicals stored at the site is less than 1 tonne (<800 L or 0.8 kL). The Protection of Environmental Operations Act and Regulations (Ref.3) indicates that chemical storage facilities that exceed 5,000 kL of storage would trigger an administrative fee unit, however, as there is less than 40 kL of chemicals stored, an administrative fee unit is not triggered, and a licence is not required for the site.

Further, as noted above, there would be no unusual operations that would cause potential odours, or noise outside of normal warehouse type operations. Noise from normal operations would not impact residential areas.

In summary, there is no potential for “offensive” operations at the site and therefore SEPP33 does not apply in this case.

5. Conclusions

The analysis conducted for the proposed Qantas flight training centre, to be Qantas Airways Limited at 297 King Street, Mascot, has been assessed for the application of *State Environmental Planning Policy No.33, Hazardous and Offensive Developments* (SEPP33), based on the proposed storage of Dangerous Goods at the facility. The NSW Department of Planning and Environment (DPE) has published a guideline to assist regulators in determining the application of SEPP33, “Applying SEPP33” (Ref.2), which contains threshold levels of DGs above which SEPP33 would apply. The analysis conducted in the study reported in this document has identified that the threshold levels of Dangerous Goods proposed for storage at the facility do not exceed the threshold levels listed in “Applying SEPP33”. Further, the transport of DGs does not exceed the threshold levels published in “Applying SEPP33” and there are no “offensive” operations at the site. Hence, it is concluded that SEPP33 would not apply to the proposed site.

6. References

1. “The Australian Code for the Transport of Dangerous Goods by Road and Rail”, known as The Australian Dangerous Goods Code or ADG, ed. 7.3, 2015, Federal Office of Road Safety, Canberra, ACT
2. “Applying SEPP33 – Hazardous and Offensive Developments”, NSW Department of Planning, Sydney, 2011.
3. Protection of the Environment Operations (General) Regulation 2009, under the Protection of the Environment Operations Act 1997, NSW Government.

7. GLOSSARY

Term	Definition
The site	Qantas Airways Limited owned land in Mascot to the north of Sydney Kingsford Smith Airport consisting of Lots 2 & 4 DP 234489, Lot 1 DP 202747, Lot B DP 164829 and Lot 133 DP 659434. Current site improvements include including at-grade car parking for Qantas staff, an industrial shed to store spare aviation parts, a substation, a disused gatehouse, a Sydney Water Asset with two driveways over it, the Qantas catering facility and Qantas tri-generation plant.
The Project	The construction of a new Flight Training Centre and ancillary uses to replace the existing facility on the Qantas Jetbase that will be impacted by RMS' Sydney Gateway Project.
The Gateway Project	A RMS Project including a road and rail component that is intended to increase capacity and improve connections to the ports to assist with growth in passenger, freight and commuter movements across the region, by expanding and improving the existing road and freight rail networks.
Class 2.1 Aerosols	Disposal (non-refillable) container filled with propellant gas and product discharged via a nozzle at the container top.
Class 2.2	Non-Flammable/Non-Toxic gas held in cylinders
Class 3	Flammable liquids held in packages (containers)
Class 6.1	Toxic substances held in packages (containers)
Class 8	Corrosive Substances held in packages I(containers)
Class 9	Miscellaneous Dangerous Goods
ASG	Australian Dangerous Goods Code (Ref.1)
SEPP33	State Environmental Planning Policy No. 33
SERAs	Secretary's Environmental Assessment Requirements
DG	Dangerous Goods
DP	Deposited Plan
Jetbase	Qantas leased land within the boundaries of Sydney Kingsford Smith Airport
kg	kilograms
LPG	Liquefied Petroleum Gas
NOS	Not Otherwise Specified
UN	United Nations
PG	Packaging Group (PGI - High Risk, PGII - Medium Risk, PGIII – Low Risk)
L	Litres
WC	Water Capacity (in reference to the volume of gas cylinders)
m ³	cubic metres
EPA	Environmental Protection Authority
kL	kilo Litres