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MECHANICAL ENGINEERING

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Wentworth Health Service Redevelopment SEPP 33 Report

Sydney December, 2022

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Project Name:	Wentworth Health Services Redevelopment	Document No	SEPP 33 Report
Project No:	227008	Revision	03
Checked:	JM		
Subject	Wentworth Health Services Redevelopment SEPP33 Assessment		

Hazardous Chemicals SEPP33 Assessment

Lot 1-DP 1136392

Introduction

The following report covers the Hazardous Chemicals (SEPP33) Assessment for the new Wentworth Health Service Redevelopment. The project is to construct a new hospital on the site of the existing Hospital at 24 Hospital Rd, Wentworth NSW 2648. The new building will be single storey, located to the south of the existing building, which will be demolished.

The new hospital building will utilise a number of hazardous chemicals (dangerous goods), as does the existing building. Developments involving hazardous chemicals are subject to assessment under State Environmental Planning Policy No. 33 – Hazardous and Offensive Development (“SEPP33”). This report is a preliminary risk screening completed in accordance with SEPP33, which considers all classes of dangerous goods associated with the development, their location and quantity.

Executive Summary

The purpose of this report is to document the planning status of the proposed development under State Environmental Planning Policy No.33*, “Hazardous and Offensive Development Application Guidelines (“SEPP33”). Inventories of the various classes of chemicals are compared to the threshold requirements set out in SEPP33. In all cases, these inventories are less than the threshold quantities or distances.

SEPP33 also examines transport activity. The level of deliveries into the proposed Hospital is far below any of the thresholds set out, so no further analysis is required.

Therefore it is concluded that the development should be assessed as not hazardous under the SEPP. SEPP33 was recently repealed and has been superseded by the State Environmental Planning Policy (Resilience and Hazards) 2021 as part of the Department's initiative to consolidate State Environmental Planning Policies to simplify and provide certainty to the planning system. A Fact Sheet available on the Planning NSW website states "Key changes: No policy changes have been made. The SEPP consolidation does not change the legal effect of the existing SEPPs, with section 30A of the Interpretation Act 1987 applying to the transferred provisions. The SEPP consolidation is administrative". The SEPP33 designation has been retained here as the supporting guidance material for the SEPP, "Applying SEPP33", is still current and the older terminology is still recognised by the planning community.

Assessment methodology

The assessment process is outlined in the guidance material which accompanies the SEPP: "Applying SEPP33", Department of Planning, January 2011.

Each class of dangerous goods is considered separately. Each class has a nominated screening method set out in Table 1 of Applying SEPP33. Inventories of each are compared to threshold quantities set out in Applying SEPP33 at Table 3.

For this proposal all inventories were found to be below SEP33 threshold.

The following documents the expected inventories and the locations of areas where hazardous chemicals are employed. The site plan and an extract showing the area at the southern end of the proposed building, where the majority of chemicals will be located, are shown in the Attachments.

Hazardous Chemicals Stored

Class	Material	Packing Group	Typical Inventory	SEPP33 Threshold
2.1	Flammable gases (other than LPG)	n/a	<20kg**(pressurised) Nil (liquefied)	Fig.6* if >100kg pressurised Fig.7 if > 500kg liquefied
2.1	LPG aboveground	n/a	1 tonne	8 tonnes – LPG
2.2	Inert gases (Medical Air)	n/a	100kg	Not subject to SEPP33
2.1/5.1	Oxidizing gases Medical Oxygen Nitrous Oxide	n/a	400 kg 10 kg	5 tonnes
2.3	Toxic gases	n/a	Nil	10 cbm
3	Flammable liquids	II or III	150 kg	5 tonnes
4	Reactive solids	II or III	Nil	1 tonne
5	Oxidisers	II or III	Nil	5 tonnes
6.1	Toxics	II or III	<5 kg	2.5 tonnes
6.2	Clinical Waste	n/a	<100 kg	0.5 tonnes
7	Radioactives	n/a	Nil***	Not subject to SEPP33
8	Corrosives	II or III	<50 kg	50 tonnes
9	Environmentally hazardous	II or III	Nil****	Not subject to SEPP33
C1 (flammable liquids category 4)	Diesel fuel (stored away from Class 3 flammable liquids)	n/a	3100 litres (estimate based on 600 litre "belly tank" under the generator, plus 2500 litre back-up tank)	Not subject to SEPP33

Table 3

* Figure 6 refers to a graph in Applying SEPP33 which makes an assessment on the basis of inventory (if >100kg) and distance from receptors such as boundaries. In this proposal it is not triggered as the inventory is less than 100kg.

**It is probable that there will be a very small number of Class 2.1 cylinders on site from time to time, in particular acetylene for maintenance welding and LPG for maintenance and barbeque use.

***Medical isotopes may be required in very small quantities (less than 100 grams) from time to time, but no significant storage is present on site.

**** Class 9 materials are not usually encountered in a hospital, except for incidental amounts which may be used in landscaping or similar. Dry ice may be encountered from time to time, if required for sample transport, but quantities will be less than 5 kg.

Comments on Hazardous Chemicals Stored

The following comments deal with those classes of hazardous chemicals which will or could be utilised on the redeveloped site.

Flammable gases (Class 2.1) – other than LPG Tank

The only flammable gases used on site may be small amounts of acetylene for maintenance welding (typically one only cylinder of 9kg capacity mounted in a portable welding set in the mechanical workshop) and LPG for maintenance and for barbeque fuel (typically two cylinders of 9kg capacity). Some aerosols, such as spray paint, cooking oil spray, room deodorisers etc. are classified as 2.1 and may be in use in very small quantities which do not require further analysis.

Flammable gases (Class 2.1) – LPG Tank

The proposed LPG tank (which is identical to the existing tank on the site) has a nominal capacity of 1 tonne. The new tank will be located at the southern edge of the site, near the Equipment Store. Inventory is well below the SEPP33 threshold of 8 tonnes.

Cryogenic (liquefied) gases (Class 2.2)

There may be a requirement for small amounts (typically 1 litre or 5 litres) of liquid nitrogen, for example for preservation and transport of tissue samples. Maximum inventory is likely to be less than 10 litres. There is typically no storage on site except for transient amounts which may be brought in and then promptly removed from site, in order to deal with a particular requirement from time to time. There is no bulk oxygen tank proposed for the site.

SEPP33 does not apply to Class 2.2 materials.

Medical Gases in Cylinders (Class 2.2)

SEPP33 does not apply to Class 2.2 materials such as Medical Air, unless they have a subsidiary risk, such as Class 2.2/5.1.

Medical Gases in Cylinders (Class 2.2/5.1)

Medical Oxygen, with subsidiary risk 5.1, will be supplied from two F9 “manifold packs”, each consisting of nine “G” size cylinders. Nitrous Oxide also has a 5.1 subsidiary risk and will be present in two small cylinders. Both the oxygen and nitrous oxide are present as compressed gases. Total inventory is well below SEPP33 threshold. All the medical gases are located in the medical gas store at the south-eastern corner of the new building.

Flammable Liquids (Class 3)

Small quantities of flammable liquids are used in various locations on the site, with total inventory being less than 150 litres (approximately 120 kg, depending on the specific gravity of the individual materials). The most commonly used flammable liquid is an ethanol-based hand cleaner which may be used in many locations throughout the hospital building, each with small inventory, often only one bottle of

375 millilitres capacity. Paint may stored in the maintenance workshop, which is located near the south boundary. SEPP33 considers flammable liquids only if total inventory exceeds 5 tonnes. Note: It is likely that alcohol-based wipes will be in use. These are sometimes labelled as Class 3 Flammable Liquids, or as Class 4 (flammable solids). Inventories of these are also minimal and well below the threshold.

Oxidizing materials (Class 5.1)

Some small quantity of Class 5.1 material may occasionally be used as a biocide, but will not generally be stored on site. Quantities, if require, will be limited to a few litres only.

Toxic materials (Class 6.1)

Some pharmaceuticals are classified as toxic materials but inventories will be very low and transient. If these are required from time to time, quantities will be less than 1 kg in each instance (typically 0.1 to 80 grams). These have no impact on SEPP33 status. There will be no inventory of these materials held in storage.

Class 6.2 Biologically hazardous materials

Bio-waste is covered by Department of Health Regulations, not the WHS Regulation which covers most other classes. Existing arrangements for safe storage and disposal, will remain. The clinical waste store is located at the south end of the new building, opposite the Equipment Store.

Class 8 Corrosives

Inventory of corrosive materials (Class 8) consists of small quantities of chemicals used mainly as cleaning materials, typically located in cleaning trolleys which are used throughout the hospital building. Incoming cleaning materials (typically up to 30 litres) will be stored in the receiving store area. Inventories are very minor in relation to SEPP33 threshold. The Cleaner's Store is located towards the southern end of the new building.

Class 9 Environmentally damaging materials

These are unlikely to be encountered in significant quantities and are in any case not considered in SEPP33.

Combustible Liquids

Diesel will present in the fuel tank of the Emergency Generator, located in the south-east corner of the site near the fire water tanks. Typically, the capacity of such tanks ranges from 300 to 1800 litres. An estimate, in the table above, of 3100 litres will almost certainly cover actual inventory. Diesel stored without the presence of Class 3 flammable liquids, as in this case, is not subject to SEPP33.

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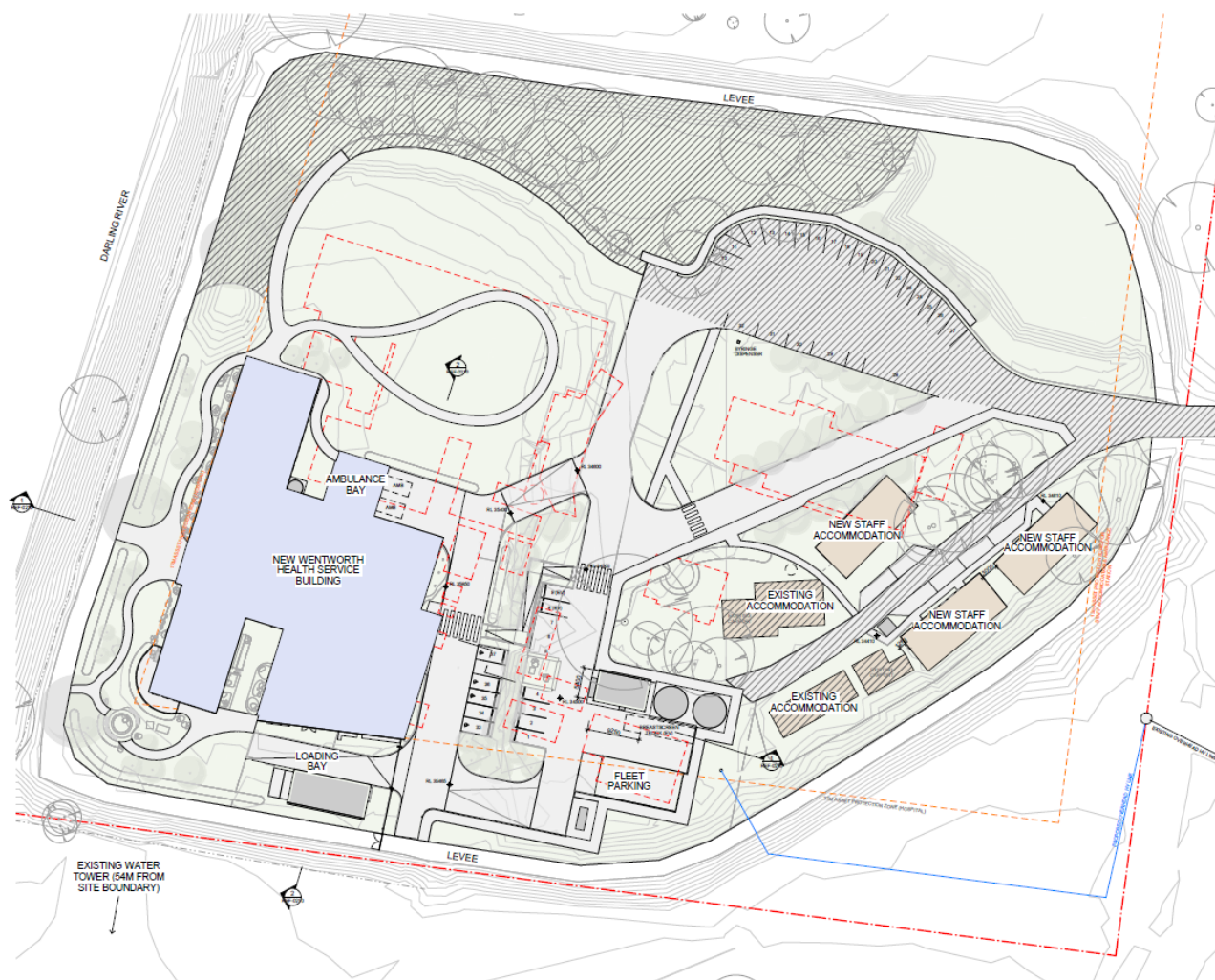
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Attachment 1 – Site Plan



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Attachment 2 – Locations of Dangerous Goods

