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LANG WALKER AO MEDICAL RESEARCH BUILDING - MACARTHUR

SEPP 33
PRELIMINARY
HAZARD ANALYSIS
SSDA NO.17491477

OCTOBER 2021

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Lang Walker AO Medical Research Building - Macarthur
SEPP 33 Preliminary Hazard Analysis
SSDA No.17491477

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REV	DATE	DETAILS
A	16 July 2021	Draft issue for Client Review
B	07 October 2021	Updated for SSDA issue
C	12 October 2021	Title changed to Lang Walker AO Medical Research Centre - Macarthur
D	12 October 2021	Title changed to Lang Walker AO Medical Research Building - Macarthur

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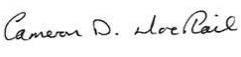
Approved by:	Cameron MacPhail	12 October 2021	

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ABBREVIATIONS

DG	Dangerous Goods
EIS	Environment Impact Statement
MMRC	Macarthur Medical Research Centre
NSW	New South Wales
PG	Packaging Group
PHA	Preliminary Hazard Analysis
SEAR	Planning Secretary's Environmental Assessment Requirements
SEPP33	State Environment Planning Policy No. 33 – Hazardous and Offensive Development
SSD	State Significant Development
w.c.	Water Capacity
WSU	Western Sydney University
LSPS	Local Strategic Planning Statement
MCS	Macarthur Clinical School
PHA	Preliminary Hazard Analysis

EXECUTIVE SUMMARY

BACKGROUND

Campbelltown has been identified as a health and education precinct and collaboration area by 'Campbelltown 2040 Local Strategic Planning Statement (LSPS) (2020)'. Strategies include growing health and education services within the Hospital and University precinct, growing community-based health services at the Hospital, and encouraging collaboration between health and education institutions.

The Macarthur Medical Research Centre (MMRC) is strongly aligned with the strategic planning framework for the site. The MMRC is located in Dharawal (or Tharawal) country, which extends along the coast south of Sydney past Nowra, and inland to Campbelltown and Camden. Within a total building area of approximately 5,000 m^2, the MMRC will include Clinical Research facilities, associated Dry Research and Collaboration spaces, a Community Engagement zone, and Back of House/Support spaces as required across four levels. The site is proposed to be on built on the existing helipad located between Building D and the Macarthur Clinical School (MCS) on the Campbelltown Hospital Campus.

The MMRC has been declared as State Significant Development (SSD), application number is SSD-17491477. As the NSW Planning Secretary's Environmental Assessment Requirement (SEAR) for the application, an EIS must be prepared in accordance with and to meet the minimum requirements of clauses 6 and 7 of Schedule 2 the Environmental Planning and Assessment Regulation 2000 (the Regulation), including addressing requirements in State Environmental Planning Policy No. 33 - Hazardous and Offensive Development.

WSP was engaged by BVN Architect on behalf of Western Sydney University (WSU) to provide a SEPP 33 screening assessment for MMRC as part of Environmental Impact Statement (EIS) submission. The SEPP 33 screening assessment shows a preliminary hazard analysis (PHA) is not required.

PURPOSE

The purpose of this report is to provide a State Environment Planning Policy No. 33 (SEPP 33) screening assessment for the MMRC in the Campbelltown Hospital Campus to understand the risk of storage and handling of dangerous goods and control measures and provide a justification of PHA applicability as per requirement in SEAR Number 20. Hazard and Risks

RECOMMENDATIONS

The MMRC will be comprised of Dry Research and Collaboration spaces, a Community Engagement zone, and Back of House/Support spaces where minor quantities of oxygen gas and flammable liquids are used. The screening result shows SEPP33 thresholds is not exceeded in the proposed MMRC site for a 'Potentially Hazardous Industry nor a 'Potentially Offensive Industry'. Therefore, a preliminary hazard analysis (PHA) is not required for MMRC project.

Should the storage conditions or volumes change, the contents and findings in the report shall be reviewed, and the risks associated with any change shall be assessed and controlled.

1 INTRODUCTION

1.1 PROJECT BACKGROUND

Campbelltown has been identified as a health and education precinct and collaboration area by 'Campbelltown 2040 Local Strategic Planning Statement (LSPS) (2020)'. Strategies include growing health and education services within the Hospital and University precinct, growing community-based health services at the Hospital, and encouraging collaboration between health and education institutions.

The Macarthur Medical Research Centre (MMRC) is strongly aligned with the strategic planning framework for the site. The proposed MMRC is located in Dharawal (or Tharawal) country, which extends along the coast south of Sydney past Nowra, and inland to Campbelltown and Camden. Within a total building area of approximately 5,000 m^2, the MMRC will include Clinical Research facilities, associated Dry Research and Collaboration spaces, a Community Engagement zone, and Back of House/Support spaces as required across four levels. The site is proposed to be on built on the existing helipad located between Building D and the Macarthur Clinical School (MCS) on the Campbelltown Hospital Campus.

WSP was engaged by BVN Architect on behalf of Western Sydney University (WSU) to provide a SEPP 33 screening assessment and a preliminary hazard analysis (PHA), if required, for MMRC project as part of Environmental Impact Statement (EIS) submission.

1.2 STATUTORY AND STRATEGIC CONTEXT

The MMRC has been declared as State Significant Development (SSD), application number is SSD-17491477. As the NSW Planning Secretary's Environmental Assessment Requirement (SEAR) for the application, an EIS must be prepared in accordance with and to meet the minimum requirements of clauses 6 and 7 of Schedule 2 the Environmental Planning and Assessment Regulation 2000 (the Regulation), including addressing requirements in State Environmental Planning Policy No. 33 - Hazardous and Offensive Development.

1.3 SCOPE

The report provides a SEPP 33 preliminary risk screening for MMRC project regarding dangerous goods storage and a justification of PHA applicability as per requirement in SEAR Number 20. Hazard and Risks (1).

2 DESCRIPTION OF DEVELOPMENT

2.1 PROJECT LOCATION

The proposed development is within the Campbelltown Hospital Campus at Therry Road, Campbelltown, NSW (Figure 2.1).

Figure 2.1 MMRC Project Location

2.2 PROJECT AREA IN THIS SSDA

As shown in Figure 2.2 below, the proposed MMRC site is on the existing helipad space next to the existing Macarthur Clinical School (MCS) and Building D within the boundary of Campbelltown Hospital Campus.

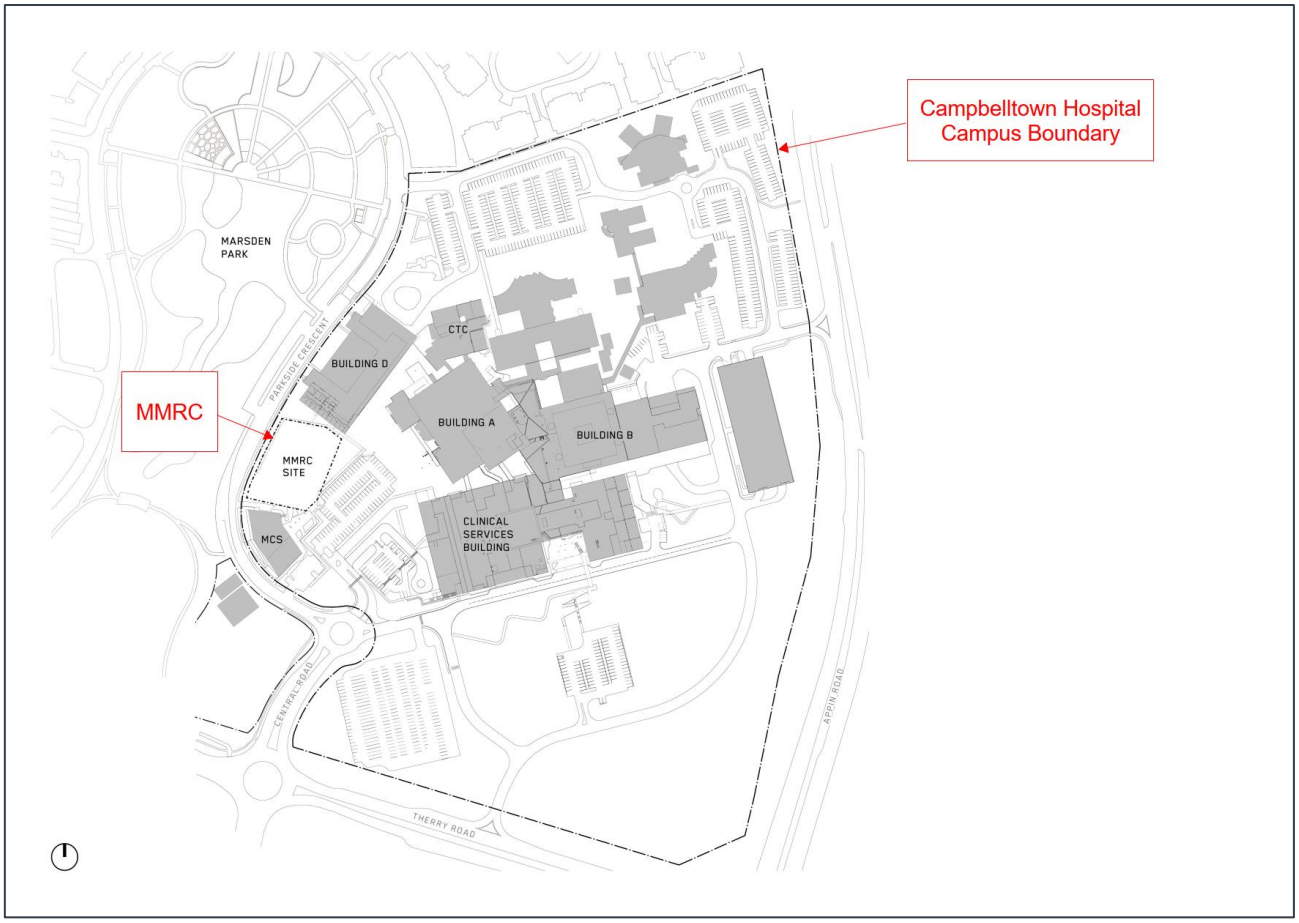

Figure 2.2 Campbelltown Hospital Campus and MMRC Location Overview

3 SEPP 33 SCREENING ASSESSMENT

3.1 SEPP 33 APPLICABILITY

3.1.1 SCREENING TEST METHODOLOGY

SEPP 33 applies to any proposals which fall under the policy's definition of 'potentially hazardous industry' or potentially offensive industry' under the Hazardous and Offensive Development Application Guidelines – Applying SEPP 33, published by New South Wales Department of Planning (2).

- **'potentially hazardous industry'** – '*when all locational, technical, operational and organizational safeguards are employed continues to pose a significant risk.'* (2) Applying SEPP 33 includes a screening method, based on the quantities of dangerous goods on a site and their vehicle movements, to assist in determining if a development is likely to be potentially hazardous industry.
- **'potentially offensive industry'** – the primary consideration whether the consent authority is satisfied that there are adequate safeguards to ensure that any emissions from a facility can be controlled to a level at which they are not significant. Where proposed activities do not require a license pursuant to Protection of the Environment Operations Act 1997, or where they do require a license but in the opinion of the environmental regulator the proponent can fully meet its license requirements, a proposal is not deemed to be 'offensive industry'.

3.1.2 CONSIDERATION OF EXISTING FACILITIES

Section 6 Common Queries in 'Apply SEPP 33' (2) clarifies the implications of SEPP 33 for an existing development. SEPP 33 applies to the MMRC site because the facility interacts with the existing premises and may add to the overall quantity of dangerous goods stored. The cumulative hazards from the Campbelltown Hospital Campus may be increased and therefore considered in this report.

3.1.3 OTHER RISK FACTORS

In some cases, the applicability of SEPP 33 is not immediately apparent. In such instances, applicants should be requested to address the matters listed in Appendix 2 of 'Apply SEPP 33' (2), to provide Councils with adequate information to base a judgement on SEPP 33 applicability.

3.2 POTENTIALLY HAZARDOUS INDUSTRY ASSESSMENT

3.2.1 STORAGE QUANTITIES SCREENING AGAINST SEPP33 THRESHOLD

The aggregate storage quantities in MMRC site are listed individually in Table 3.1 below. If the storage quantity in the MMRC site exceeds the threshold set in 'Applying SEPP33', then a 'Yes' is given in the last column of the table.

Note: The MMRC site is a clinical centre with only consultation room and dry labs, chemical storage and use is expected to be minimal.

Table 3.1 SEPP 33 General Screening Threshold Quantities. Ref: Applying SEPP 33, Table 1 and Table 3 (2)

DG CLASS	DESCRIPTION	SEPP 33 THRESHOLD	DESCRIPTION	MMRC (TONNE)	DOES SEPP33 APPLY
2.1	Flammable gases	10 tonne or 16 m^3	If stored above ground	0	No
		40 tonne or 64 m^3	If stored underground or mounded	0	N/A
2.2	Non-flammable, non-toxic gases	No limit is set	Non-flammable, nontoxic gas	750 L (w.c.) oxygen gas	No
2.3	Toxic gases	5 tonne	Anhydrous ammonia	0	No
		1 tonne	Chlorine and sulphur dioxide stored as liquefied gas in containers <100 kg	0	No
		2.5 tonne	Chlorine and sulphur dioxide stored as liquefied gas in containers >100 kg	0	No
		100 kg	Liquefied gas kept in or on premises	0	No
		100 kg	Other poisonous gases	0	No
3	Flammable liquids	2 tonne	PG I	0	No
		5 tonne	PG II/III	0.003 (one off 30 L flammable liquid storage cabinet)	No
4.1	Flammable solids, self-reactive substances and solid desensitised explosives	5 tonne	None	0	No
5.1	Oxidizing agents i.e. ammonium dichromate	25 tonne	Ammonium nitrate — high density fertiliser grade, kept on rural zoned land where rural industry is carried out, if the depot is at least 50 metres from the site boundary	0	No
		5 tonne	Ammonium nitrate — elsewhere	0	No

DG CLASS	DESCRIPTION	SEPP 33 THRESHOLD	DESCRIPTION	MMRC (TONNE)	DOES SEPP33 APPLY
		2.5 tonne	Dry pool chlorine — if at a dedicated pool supply shop, in containers < 30 kg	0	No
		1 tonne	Dry pool chlorine — if at a dedicated pool supply shop, in containers > 30 kg	0	No
		5 tonne	Any other class 5.1	750 L (w.c) oxygen gas	No
5.2	Organic peroxides i.e. ethyl methyl ketone peroxide	10 tonne	None	0	No
6.1	Toxic substances i.e. cyanides, arsenic compounds and lead acetate	0.5 tonne	PG I	0	No
		2.5 tonne	PG II and III	0	No
6.2	Infectious substances	0.5 tonne	Includes clinical waste	Less than 0.25 (one off 240 L clinic bin, emptied twice a week)	No
7	Radioactive material	all	all	0	No
8	Corrosive substances	5 tonne	PG I	0	No
		25 tonne	PG II	0	No
		50 tonne	PG III	0	No
9	Miscellaneous dangerous substances and articles	No limit is set	PG I, II and III	0	No

3.2.2 VEHICLE MOVEMENTS

Table 3.2 below sets out the transportation screening thresholds of dangerous goods in accordance with SEPP 33. As the MMRC site is a clinical centre with dry lab, the vehicle movements due to dangerous goods transportation are expected to be below the threshold.

Table 3.2 Transportation Screening Thresholds, ref: Applying SEPP33 Table 2 (2)

DG CLASS	VEHICLE MOVEMENTS THRESHOLD		MINIMUM QUANTITY (SEE NOTE 1)		DOES SEPP33 APPLY
	Cumulative	Peak	per load (tonne)		
	Annual	Weekly	Bulk	Packages	
2.1	> 500	> 30	2	5	N/A
2.2	No limit is set	No limit is set	No limit is set	No limit is set	No
2.3	> 100	> 6	1	2	N/A
3 PG I	> 500	> 30	1	1	No
3 PG II	> 750	> 45	3	10	No
3 PG III	> 1,000	> 60	10	No limit	No
4.1	> 200	> 12	1	2	No
4.2	> 100	> 3	2	5	N/A
4.3	> 200	> 12	5	10	N/A
5	> 500	> 30	2	5	No
6.1	All	All	1	3	N/A
6.2	See note 2	See note 2	See note 2	See note 2	See note 2
7	See note 2	See note 2	See note 2	See note 2	See note 2
8	> 500	> 30	2	5	N/A
9	> 1000	> 60	No limit	No limit	N/A

Notes:

1. If quantities are below this level, the potential risk is unlikely to be significant unless the number of traffic movements is high (Ref: Applying SEPP33 Table 2).
2. Where proposals include materials of class 1, 6.2 or 7, the Department of Planning should be contacted for advice (Ref: Applying SEPP33 Table 2).

3.3 POTENTIALLY OFFENSIVE INDUSTRY ASSESSMENT

The MMRC site in the Campbelltown Hospital Campus is unlikely to be an 'potentially offensive industry'.

According to the Clinical and Related Waste Management for Health Services (Document number: PD2017_026, Date: 14 Aug 2017), Published by NSW Health (3): '*No EPA licence is required for cytotoxic waste (this includes any residual cytotoxic drug or laboratory chemical) and pharmaceutical waste'*.

Therefore, the MMRC site at Campbelltown Hospital is unlikely to be a 'potentially offensive industry'.

3.4 SEPP 33 – OTHER RISK FACTORS

Appendix 2 of Applying SEPP 33 (2) outlines other risk factors for consideration to identify hazards outside the scope of the risk screening method. A review of these risk factors was undertaken as shown in Table 3.3. No risk factor was found to trigger a PHA due to MMRC.

Table 3.3 SEPP 33 Other Risk Factors

SEPP 33 OTHER RISK FACTORS CHECKLIST	COMMENTS	PHA REQUIRED
Any incompatible materials (hazardous and non-hazardous materials)	The MMRC site has minor storage of dangerous goods and are planned to be stored in their dedicated area. It is unlikely to have potentially dangerous chemical reactions due to incompatible materials being stored together.	No
Any wastes that could be hazardous	There will be very small amount of clinical wastes generated from clinical consultation rooms from MMRC site which is planned to be managed by authorized waste Contractors.	No
The possible existence of dusts within confined areas	Dust within confined areas is unlikely to exist in hospital environment.	No
Types of activities the dangerous goods and otherwise hazardous materials are associated with (storage, processing, reaction, etc.)	No dangerous activities are expected in handling dangerous goods in a clinical research centre environment.	No
Incompatible, reactive or unstable materials and process conditions that could lead to uncontrolled reaction or decomposition	Not applicable for MMRC site	No
Storage or processing operations involving high (or extremely low) temperatures and/or pressures; and	Not applicable for MMRC site	No
Details of known past incidents (and near misses) involving hazardous materials and processes in similar industries.	No significant hazardous events due to fire, explosion or toxic release.	No

3.5 CONCLUSION ON THE APPLICABILITY OF SEPP 33

The screening result shows SEPP 33 thresholds are not exceeded in the proposed development for a 'Potentially Hazardous Industry nor a 'Potentially Offensive Industry'. Therefore, a preliminary hazard analysis (PHA) is not required for MMRC project.

Should the storage conditions or volumes change, the contents and findings in the report shall be reviewed, and the risks associated with any change shall be assessed and controlled.

4 REFERENCES

1. ***Planning Secretary's Environmental Assessment Requirements (SEARs), SSD-17491477.*** **12 May 2021.**

2. ***Hazardous and Offensive Development Application, Apply SEPP 33.*** **s.l. : NSW Planning, Jan 2011.**

3. ***Clinical and Related Waste Management for Health Services (Document number: PD2017_026, date: 14 Aug 2017).*** **s.l. : NSW Health.**

4. ***Hazardous Industry Planning Advisory Paper (HIPAP) No. 6, Hazard Analysis.*** **s.l. : NSW Department of Planning, January 2011.**

5. ***Appendix BB_Hazardous Chemicals _Dangerous Goods_ Matters Advice (Hazardous Chemicals (Dangerous Goods) Matters – Advice on the Facilities for Storing and Handling of Hazardous Chemicals/Dangerous Goods for the Proposed Acute Services Building Project.***

6. ***AS/ISO 31000:2018 Risk Management Guidelines.***

7. ***Ref: WorkCover NSW Acknowledge Number: NDG018496, issued on 12 May 2015 to Premises: Barker St, Randwick NSW 2031, Australia. Verification of the data is not included in the scope of this report.***

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