The Sutherland Hospital

Operating Theatre Upgrade Project

SEPP 33 Requirements

REP/001

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Executive Summary

State Environmental Planning Policy No. 33 Hazardous and Offensive Development (SEPP 33) is used in New South Wales to regulate the planning approval process for developments in hazardous and offensive industries, and potentially hazardous and potentially offensive industries.

This report follows the *Applying SEPP 33* guidance document to define the thresholds for storage quantities of dangerous goods, in particular Class 3, 5.1 and 8 for Sutherland Hospital ("Site"). Item 21 of the *Planning Secretary's Environmental Assessment Requirements* (SEARs) issued on the 10th of December 2020, specifies that a SEPP 33 assessment is required as well as a Preliminary Hazard Analysis (PHA) if the development is deemed "potentially hazardous".

This assessment concluded that the cryogenic oxygen storage tanks exceed the screening threshold of SEPP 33. The Site should be considered **potentially hazardous** and therefore a preliminary hazard assessment (PHA) is required. The PHA should be prepared in accordance with Hazardous Industry Planning Advisory Paper No. 6 — Hazard Analysis.

1 Introduction

This report follows the prescriptive SEPP 33 process outlined in the NSW Department of Planning, Industry and Environment's (DPIE's) guidance document *Applying SEPP 33* (2011), specifically the flowchart presented in Figure 1 of Applying SEPP 33. This process defines thresholds for storage quantities of dangerous goods and transport frequencies.

Item 21 of the *Planning Secretary's Environmental Assessment Requirements (*SSD-11099584) issued on the 10th of December 2020, see Appendix A, specifies that SEPP 33 assessment is required and should the development be deemed "potentially hazardous", a Preliminary Hazard Analysis (PHA) must be prepared in accordance the Applying SEPP33 guideline, the Hazardous Industry Planning Advisory Paper No. 6 'Hazard Analysis' (DoP, 2011) and Multi-Level Risk Assessment (DoP, 2011).

The Sutherland Hospital ("Site") is assessed against the Applying SEPP 33 guideline to determine whether a PHA must be undertaken.

2 Dangerous Goods Quantity

Table 1: Dangerous goods Classes and quantities stored at Site (source: Correspondence via email from Steph Rossi at CBRE)

Dangerous Good	Class, Packing Group	Quantity
Oxygen (main tank): Cryogenic	2.2 subsidiary risk 5.1	15,000 L

Oxygen (backup tank): Cryogenic	2.2 subsidiary risk 5.1		5,000 L
Diesel (tank)	C1 combustible liquid		16,000 L
Diesel (additional storage tank)	C1 combustible liquid		1,000 L
Oxygen (medical liquid bulk)	2.2 subsidiary risk 5.1		Unknown
Compressed oxygen (medical)	2.2 subsidiary risk 5.1		Unknown
Compressed air (medical)	2.2		N/A
Compressed carbon dioxide (medical)	2.2		N/A
Medical nitrous oxide (medical)	2.2 subsidiary risk 5.1		18 G-size[1]: 900 L
Alcohol based hand sanitiser	3, II		30 L
Other cleaning products	Break Up (degreaser)	8, III	50 L (Note: This is the quantity used per month. It is assumed the total storage is no more than 50 L at one time)
	JF Citrus (general purpose cleaner)	N/A	
	Cleera (toilet cleaner)	N/A	
	R7 (cream cleanser)	N/A	
	Citrus cleaner	N/A	
	Chlor- Clean (terminal clean)	N/A	

[1] The average G-size cylinder has an aggregate water capacity of 50 L

	View Quick (for scrubbing machine)	N/A	
	Steamy (carpet shampoo)	N/A	

Regarding diesel, under the *Australian Dangerous Goods Code* (ADGC) ed 7.6 if the flash point of a fuel is > 60°C and the fuel is not at flash temperature then it is not classified under the ADGC. All of the safety data sheets of the major suppliers i.e. BP and Viva Energy, rank it as having a flash point above 60°C. As the diesel will not be stored at these temperatures, it will not come into the screening process (see Table 1 of Applying SEPP 33) provided that it is not stored with other flammable items.

Class 2.2 does not present an offsite risk according to Applying SEPP 33, however subsidiary Class 5.1 do, thus need to be consider when calculating thresholds.

3 SEPP 33 Planning Requirements

SEPP 33 (State Environmental Planning Policy No. 33 Hazardous and Offensive Development) is a legislative requirement in NSW. 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; and
- 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.

Applying SEPP 33 is a guideline on interpreting and implementing the legislative requirement that includes a screening method based on the quantities of dangerous goods on a site, to assist in determining if a development is likely to be potentially hazardous industry.

3.1 Definitions

Potentially hazardous industry is defined by SEPP 33 to mean a 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—

(a) to human health, life or property, or

(b) to the biophysical environment,

and includes a hazardous industry and a hazardous storage establishment.

A **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.

3.2 SEPP 33 Process

The following Figure 1 illustrates the procedure for determining if SEPP 33 applies.

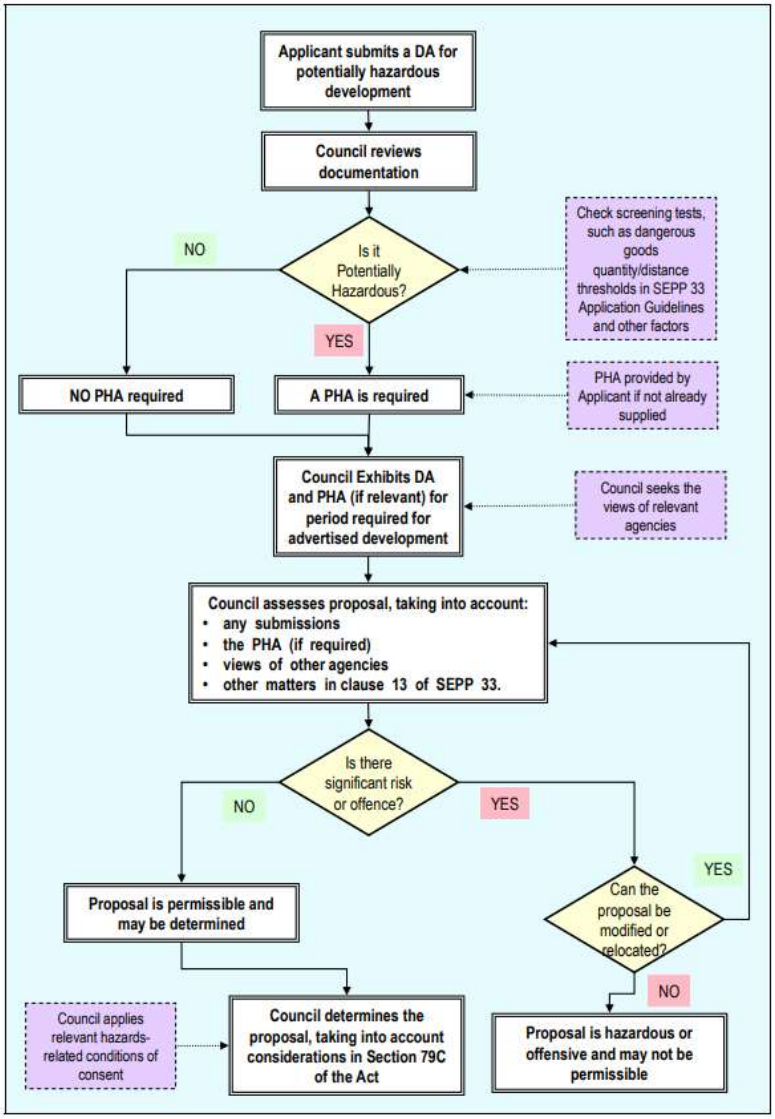

Figure 1: The SEPP 33 process (source: Applying SEPP 33 Figure 1)

To determine if the proposed development is potentially hazardous, screening tests for the quantity/distance thresholds for dangerous goods is required.

3.3 Risk Screening

The following Table 2 shows which dangerous goods Classes exceeds the threshold quantities.

Table 2: Screening threshold quantity (source: Applying SEPP 33 Table 1 and Table 3).

Class	Method to Use/Minimum Quantity	Threshold Exceeded?
3 PGII and III	5 tonnes	No
5.1	5 tonnes	Yes

8	50 tonnes	No

Note: Regarding Class 5.1, the total quantity does not consider the oxygen cylinders.

The density of liquid oxygen is 1.141 kg/m^3, therefore cryogenic oxygen of subsidiary Class 5.1 exceeds the screening threshold quantity under SEPP 33.

Regarding transportation issues, the proposed development may be potentially hazardous if the number of generated traffic movements (for significant quantities of hazardous materials entering or leaving the site) is above the annual or weekly cumulative vehicle movements shown in Figure 2.

If the proposal is found to be potentially hazardous with respect to transportation, a route evaluation study should be completed in accordance with the Department of Planning's HIPAP 11: Route Selection.

	Vehicle Movements		**Minimum quantity***	
	Cumulative	Peak	**per load (tonne)**	
Class	Annual *or*	Weekly	Bulk	Packages
1	see note	see note	see note	
2.1	>500	>30	2	5
2.3	>100	>6	1	2
3PGI	>500	>30	1	1
3PGII	>750	>45	3	10
3PGIII	>1000	>60	10	no limit
4.1	>200	>12	1	2
4.2	>100	>3	2	5
4.3	>200	>12	5	10
5	>500	>30	2	5
6.1	all	all	1	3
6.2	see note	see note	see note	
7	see note	see note	see note	
8	>500	>30	2	5
9	>1000	>60	no limit	

Note: *Where proposals include materials of class 1, 6.2 or 7, the Department of Planning should be contacted for advice. Classes used are those referred to in the Dangerous Goods Code and are explained in Appendix 7.*

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

Figure 2: Transportation screening thresholds (source: Applying SEPP 33 Table 2)

3.4 Applicability

As the quantity threshold test was exceeded, the proposed development should be considered potentially hazardous and SEPP 33 will apply.

A preliminary hazard analysis (PHA) must be submitted with the development application. The PHA should be prepared in accordance with Hazardous Industry Planning Advisory Paper No. 6 — Hazard Analysis. An outline of the

requirements for the preparation and assessment of a PHA is given in Applying SEPP 33 Appendix 5.

Note, a PHA must consider all the dangerous goods stored, even if the quantity/distance threshold was not exceeded.

If the transport quantities in Figure 2 is not exceeded, the PHA need not consider transport issues.

4 Conclusion

The cryogenic oxygen storage tanks exceed the screening threshold of SEPP 33. The proposed development would be considered potentially hazardous and a PHA must be submitted. The PHA should be prepared in accordance with Hazardous Industry Planning Advisory Paper No. 6 — Hazard Analysis.

Appendix A

SEARs

Planning Secretary's Environmental Assessment Requirements

Section 4.12(8) of the *Environmental Planning and Assessment Act 1979*
Schedule 2 of the Environmental Planning and Assessment Regulation 2000

Application Number	SSD-11099584
Project Name	Sutherland Hospital Operating Theatre Upgrade
Location	Kingsway and Kareena Road, Caringbah
Applicant	Health Administration Corporation
Date of Issue	10 December 2020
General Requirements	The Environmental Impact Statement (EIS) must be prepared in accordance with and meet the minimum requirements of clauses 6 and 7 of Schedule 2 the Environmental Planning and Assessment Regulation 2000 (the Regulation). Notwithstanding the key issues specified below, the EIS must include an environmental risk assessment to identify the potential environmental impacts associated with the development. In addition, the EIS must include: • an executive summary • a complete description of the development, including: o the need for the development o justification for the development o suitability of the site o alternatives considered o likely interactions between the development and existing, approved and proposed operations in the vicinity of the site o a description of any proposed building works o a description of existing and proposed operations o site survey plan, showing existing levels, location and height of existing and adjacent structures / buildings and site boundaries o a detailed constraints map identifying the key environmental and other land use constraints that have informed the final design of the development o plans, elevations and sections of the proposed development o cladding, window and floor details, including materials o a site plan showing all infrastructure and facilities (including any infrastructure that would be required for the development, but the subject of a separate approvals process) o plans and details of any business identification signs to be installed, including size, location and finishes o any staging of the development o details of construction and decommissioning including timing o an estimate of the jobs that would be created during the construction and operational phases of the development along with details of the methodology to determine the figures provided.

	• a detailed assessment of the key issues identified below, and any other significant issues identified in the risk assessment, including:
	  o a description of the existing environment, using sufficient baseline data and methodology to establish baseline conditions
	  o an assessment of the potential impacts of all stages of the development on all potentially impacted environments, sensitive receivers, stakeholders and future developments. The assessment must consider any relevant legislation, policies and guidelines
	  o consideration of the cumulative impacts due to all other developments in the vicinity (completed, underway or proposed)
	  o identification of all proposed monitoring or required changes to existing monitoring programs
	  o measures to avoid, minimise and if necessary, offset predicted impacts, including detailed contingency plans for managing any significant risks to the environment and triggers for each action
	  o details of alternative measures considered.
	• a consolidated summary of all the proposed environmental management and monitoring measures, identifying all commitments included in the EIS
	• the reasons why the development should be approved and a detailed evaluation of the merits of the development, including consequences of not carrying out the development.
	The EIS must be accompanied by a report from a qualified quantity surveyor providing a detailed calculation of the capital investment value (CIV) (as defined in clause 3 of the Regulation) of the proposal, including details of all assumptions and components from which the CIV calculation is derived.

Key Issues	The EIS must address the following specific matters: **1. Statutory and Strategic Context** Address the statutory provisions contained in all relevant environmental planning instruments, including but not limited to: • State Environmental Planning Policy (State and Regional Development) 2011 • State Environmental Planning Policy (Infrastructure) 2007 • State Environmental Planning Policy No. 33 - Hazardous and Offensive Development • State Environmental Planning Policy No 64 – Advertising and Signage • State Environmental Planning Policy No 55 – Remediation of Land • Draft State Environmental Planning Policy (Remediation of Land) • Draft State Environmental Planning Policy (Environment) • Sutherland Shire Local Environmental Plan 2011. Having regard to the relevant environmental planning instruments: • address the permissibility of the development, including the nature and extent of any prohibitions. • identify compliance with the development standards applying to the site and provide justification for any contravention of the development standards. • adequately demonstrate and document how each of the provisions in the listed instruments are addressed, including reference to necessary technical documents.

2. Policies

Address the relevant planning provisions, goals and strategic planning objectives in all relevant planning policies including but not limited to the following:

- NSW State Priorities
- State Infrastructure Strategy 2018 – 2038 Building the Momentum
- Future Transport Strategy 2056
- Crime Prevention through Environmental Design (CPTED) Principles
- Better Placed: An integrated design policy for the built environment of New South Wales (Government Architect NSW (GANSW), 2017)
- Healthy Urban Development Checklist (NSW Health, 2009)
- Draft Greener Places Design Guide (GANSW)
- The Greater Sydney Region Plan - A Metropolis of Three Cities
- South District Plan
- Sutherland Local Strategic Planning Statement.

3. Built Form and Urban Design

- Address:
  - the height, density, bulk and scale, setbacks and interface of the proposal in relation to the surrounding development, topography, streetscape and any public open spaces
  - design quality and built form, with specific consideration of the overall site layout, streetscape, open spaces, façade, rooftop, massing, setbacks, building articulation, materials and colours
  - how Crime Prevention through Environmental Design (CPTED) principles are to be integrated into development
  - how good environmental amenity would be provided, including access to natural daylight and ventilation, acoustic separation, access to landscape and outdoor spaces and future flexibility
  - how services, including but not limited to waste management, loading zones, and mechanical plant are integrated into the design of the development.
- Provide:
  - a detailed site and context analysis to justify the proposed site planning and design approach including massing options and preferred strategy for future development
  - a visual impact assessment that identifies any potential impacts on the surrounding built environment and landscape including views to and from the site and any adjoining heritage items.

4. Tree Removal and Landscaping

- Provide:
  - an arboricultural impact assessment, prepared by a Level 5 (Australian Qualifications Framework) Arborist in accordance with the Australian Standard 4970 Protection of trees on development sites (AS 4970), which details the number, location and condition of trees to be removed and retained and existing canopy coverage on-site
  - a detailed site-wide landscape strategy, that:

	▪ details the proposed site planting, including location, number and species of plantings, heights of trees at maturity and proposed canopy coverage ▪ considers equity and amenity of outdoor spaces, and integration with built form, security, shade, topography and existing vegetation ▪ demonstrates how the proposed development would: – contribute to long term landscape setting in respect of the site and the streetscape – mitigate the urban heat island effect and ensure appropriate comfort levels on-site – contribute to objectives to increase urban tree canopy cover. o a detailed landscape plan prepared by a suitably qualified person. *Relevant Policies and Guidelines:* • Draft Greener Places Design Guide (GANSW) • Objective 30 of The Greater Sydney Region Plan - A Metropolis of Three Cities • Technical Guidelines for Urban Green Cover in NSW (Office of Environment and Heritage (OEH), 2015). **5. Environmental Amenity** • Assess amenity impacts on the surrounding locality, including solar access, visual privacy, visual amenity, overshadowing, wind impacts and acoustic impacts. A high level of environmental amenity for any surrounding residential land uses must be demonstrated. • Provide: o shadow diagrams o a view analysis of the site from key vantage points and streetscape locations and public domain including photomontages or perspectives showing the proposed and likely future development o an analysis of proposed lighting that identifies measures to reduce spill into the surrounding sensitive receivers o details of the nature and extent of any intensification of use associated with the proposed development, particularly in relation to any increase in staff and inpatient bed numbers and detail measures to manage and mitigate any impacts. **6. Transport and Accessibility** Include a transport and accessibility impact assessment, which includes, but is not limited to the following: • analysis of the existing transport network, including: o road hierarchy o pedestrian, cycle and public transport infrastructure o details of current daily and peak hour vehicle movements based on traffic surveys and / or existing traffic studies relevant to the locality o existing performance levels of nearby intersections utilising appropriate traffic modelling methods (such as SIDRA network modelling). • details of the proposed development, including: o a map of the proposed access which identifies public roads, bus routes, footpaths and cycleways

	o vehicular access arrangements, including for service and emergency vehicles and loading/unloading, including swept path analysis demonstrating the largest design vehicle entering and leaving the site and moving in each direction through intersections along the proposed transport routes o car parking, bicycle parking and end-of-trip facilities o drop-off / pick-up zone(s)/arrangements. o pedestrian or road infrastructure improvements or safety measures. • analysis of the impacts due to the operation of the proposed development, including: o proposed modal split for all users of the development including vehicle, pedestrian, cyclist, public transport and other sustainable travel modes o estimated total daily and peak hour vehicular trip generation o a clear explanation and justification of the: ▪ assumed growth rate applied ▪ volume and distribution of proposed trips to be generated ▪ type and frequency of design vehicles accessing the site. o details of performance of nearby intersections with the additional traffic generated by the development both at the commencement of operation and in a 10-year time period (using SIDRA network modelling) o cumulative traffic impacts from any surrounding approved development(s). o adequacy of pedestrian, bicycle and public transport infrastructure to accommodate the development o adequacy of car parking and bicycle parking provisions when assessed against the relevant car / bicycle parking codes and standards o adequacy of the drop-off / pick-up zone(s), including assessment of any related queuing during peak-hour access o adequacy of the existing / proposed pedestrian infrastructure to enable convenient and safe access to and from the site for all users. • measures to ameliorate any adverse traffic and transport impacts due to the development based on the above analysis, including: o travel demand management measures to encourage sustainable transport (such as a Green Travel Plan and / or specific Workplace Travel Plan) o infrastructure improvements, including details of timing and method of delivery. • a preliminary operational traffic and access management plan • analysis of the impacts of the traffic generated during construction of the proposed development, including: o construction vehicle routes, types and volumes o construction program (duration and milestones) o on-site car parking and access arrangements for construction, emergency and construction worker vehicles o cumulative impacts associated with other construction activities in the locality (if any) o road safety at identified intersections near the site due to conflicts between construction vehicles and existing traffic in the locality o measures to mitigate impacts, including to ensure the safety of pedestrian and cyclists during construction.

	• a preliminary Construction Traffic and Pedestrian Management Plan. *Note: Further guidance is provided in the TfNSW advice attached to the SEARs.* *Relevant Policies and Guidelines:* • Guide to Traffic Generating Developments (Roads and Maritime Services, 2002) • EIS Guidelines - Road and Related Facilities (Department of Urban Affairs and Planning (DUAP), 1996) • Cycling Aspects of Austroads Guides • NSW Planning Guidelines for Walking and Cycling (Department of Infrastructure, Planning and Natural Resources (DIPNR), 2004) • Guide to Traffic Management Part 12: Integrated Transport Assessments for Developments (Austroads, 2020) • Australian Standard 2890.3 Parking facilities, Part 3: Bicycle parking (AS 2890.3). **7. Ecologically Sustainable Development (ESD)** • Detail: o how ESD principles (as defined in clause 7(4) of Schedule 2 of the Regulation) would be incorporated in the design and ongoing operation phases of the development o proposed measures to minimise consumption of resources, water (including water sensitive urban design) and energy o how the future development would be designed to consider and reflect national best practice sustainable building principles to improve environmental performance and reduce ecological impact. This should be based on a materiality assessment and include waste reduction design measures, future proofing, use of sustainable and low-carbon materials, energy and water efficient design (including water sensitive urban design) and technology and use of renewable energy. • Include: o an assessment against an accredited ESD rating system or an equivalent program of ESD performance. This should include a minimum rating scheme target level o a statement regarding how the design of the future development is responsive to the CSIRO projected impacts of climate change o an Integrated Water Management Plan detailing any proposed alternative water supplies, proposed end uses of potable and non-potable water, and water sensitive urban design. *Relevant Policies and Guidelines:* • NSW and ACT Government Regional Climate Modelling (NARCliM) climate change projections. **8. Heritage** • Address any archaeological potential and significance on the site and the impacts the development may have on this significance. **9. Aboriginal Cultural Heritage** • Provide an Aboriginal Cultural Heritage Assessment Report (ACHAR) that:

	o identifies and describes the Aboriginal cultural heritage values that exist across the site o includes surface surveys and test excavations where necessary o has been prepared in accordance with the Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW (OEH, 2011) and Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW (OEH, 2010) o incorporates consultation with Aboriginal people in accordance with Aboriginal Cultural Heritage Consultation Requirements for Proponents (Department of Environment, Climate Change and Water, 2010) o documents the significance of cultural heritage values of Aboriginal people who have a cultural association with the land o identifies, assesses and documents all impacts on the Aboriginal cultural heritage values o demonstrates attempts to avoid any impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the ACHAR and EIS must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to the Environment, Energy and Science Group of the Department of Planning, Industry and Environment. • Any Aboriginal objects recorded as part of the Aboriginal Cultural Heritage Assessment must be documented and notified to the Aboriginal Heritage Information Management System (AHIMS) within Heritage NSW of the Department of Premier and Cabinet. **10. Social Impacts** • Provide a Social Impact Assessment prepared in accordance with the draft Social Impact Assessment Guideline 2020. *Relevant Policies and Guidelines:* • Draft Social Impact Assessment Guideline 2020 (Department of Planning, Industry and Environment) **11. Noise and Vibration** • Provide a noise and vibration impact assessment that: o includes a quantitative assessment of the main noise and vibration generating sources during demolition, site preparation, bulk excavation and construction o details the proposed construction hours and provide details of, and justification for, instances where it is expected that works would be carried out outside standard construction hours o includes a quantitative assessment of the main sources of operational noise, including consideration of any mechanical services (e.g. air conditioning plant) o outlines measures to minimise and mitigate the potential noise impacts on nearby sensitive receivers o considers sources of external noise intrusion in proximity to the site (including, road rail and aviation operations) and identifies building performance requirements for the proposed development to achieve appropriate internal amenity standards

	o demonstrates that the assessment has been prepared in accordance with polices and guidelines relevant to the context of the site and the nature of the proposed development. *Relevant Policies and Guidelines:* • NSW Noise Policy for Industry 2017 (NSW Environment Protection Authority (EPA) • Interim Construction Noise Guideline (Department of Environment and Climate Change, 2009) • Assessing Vibration: A Technical Guideline 2006 (Department of Environment and Conservation, 2006) • Australian Standard 2363 Acoustics - Measurement of noise from helicopter operations (AS 2363). **12. Biodiversity** • Provide a Biodiversity Development Assessment Report (BDAR) that assesses the biodiversity impacts of the proposed development in accordance with the requirements of the *Biodiversity Conservation Act 2016*, *Biodiversity Conservation Regulation 2017* and Biodiversity Assessment Method, except where a BDAR waiver has been issued in relation to the development or the development is located on biodiversity certified land. • Where a BDAR is not required because a BDAR waiver has been issued in relation to the development, provide: o a copy of the BDAR waiver and demonstrate that the proposed development is consistent with that covered in BDAR waiver o an assessment of flora and fauna impacts where significant vegetation or flora and fauna values would be affected by the proposed development. *Note: Further guidance is provided in the Biodiversity and Conservation Division Standard Environmental Assessment Requirements attached to the SEARs.* **13. Contributions** • Identify: o any Section 7.11/7.12 Contribution Plans, Voluntary Planning Agreements or Special Infrastructure Contribution Plans that affect land to which the application relates or the proposed development type o any contributions applicable to the proposed development under the identified plans and/or agreements. Justification is to be provided where it is considered that the proposed development is exempt from making a contribution o any actions required by a Voluntary Planning Agreement or draft Voluntary Planning Agreement affecting the site or amendments required to a Voluntary Planning Agreement affected by the proposed development. **14. Staging** • Assess impacts of staging where it is proposed and detail how construction works and operations would be managed to ensure public safety and amenity on and surrounding the site. **15. Utilities** • In consultation with relevant service providers:

	o assess of the impacts of the development on existing utility infrastructure and service provider assets surrounding the site o identify any infrastructure upgrades required off-site to facilitate the development and any arrangements to ensure that the upgrades will be implemented on time and be maintained o provide an infrastructure delivery and staging plan, including a description of how infrastructure requirements would be co-ordinated, funded and delivered to facilitate the development. **16. Stormwater Drainage** • Provide: o a preliminary stormwater management plan for the development that: ▪ is prepared by a suitably qualified person in consultation with Council and any other relevant drainage authority ▪ details the proposed drainage design for the site including on-site detention facilities, water quality measures and the nominated discharge point ▪ demonstrates compliance with Council or other drainage authority requirements. o stormwater plans detailing the proposed methods of drainage without impacting on the downstream properties. • Where drainage infrastructure works are required that would be handed over to Council, provide full hydraulic details and detailed plans and specifications of proposed works that have been prepared in consultation with Council and comply with Council's relevant standards. <u>*Relevant Policies and Guidelines:*</u> • Guidelines for developments adjoining land managed by the Office of Environment and Heritage (OEH, 2013). **17. Flooding** • Identify any flood risk on-site in consultation with Council and having regard to the most recent flood studies for the project area and the potential effects of climate change, sea level rise and an increase in rainfall intensity • Assess the impacts of the development, including any changes to flood risk on-site or off-site, and detail design solutions to mitigate flood risk where required. <u>*Relevant Policies and Guidelines:*</u> • NSW Floodplain Development Manual (DIPNR, 2005). **18. Soil and Water** • Provide: o an assessment of potential impacts on surface and groundwater (quality and quantity), soil, related infrastructure and watercourse(s) where relevant o details of measures and procedures to minimise and manage the generation and off-site transmission of sediment, dust and fine particles o an assessment of salinity and acid sulphate soil impacts, including a Salinity Management Plan and/or Acid Sulphate Soils Management Plan, where relevant.

	Relevant Policies and Guidelines: • Managing Urban Stormwater - Soils and Construction Volume 1 (Landcom, 2004) • Guidelines for development adjoining land managed by the Office of Environment and Heritage (OEH, 2013). **19. Waste** • Identify, quantify and classify the likely waste streams to be generated during construction and operation • Describe the measures to be implemented to manage, reuse, recycle and safely dispose of this waste • Identify appropriate servicing arrangements (including but not limited to, waste management, loading zones, mechanical plant) for the site. • Provide a hazardous materials survey of existing aboveground buildings that are proposed to be demolished or altered. *Relevant Policies and Guidelines:* • Waste Classification Guidelines (EPA, 2014). **20. Contamination** • Assess and quantify any soil and groundwater contamination and demonstrate that the site is suitable for the proposed use in accordance with SEPP 55. This must include the following prepared by certified consultants recognised by the NSW Environment Protection Authority: o Preliminary Site Investigation (PSI) o Detailed Site Investigation (DSI) where recommended in the PSI o Remediation Action Plan (RAP) where remediation is required. This must specify the proposed remediation strategy o Preliminary Long-term Environmental Management Plan (LEMP) where containment is proposed on-site. *Relevant Policies and Guidelines:* • Managing Land Contamination: Planning Guidelines - SEPP 55 Remediation of Land (DUAP, 1998) • Sampling Design Guidelines (EPA, 1995) • Guidelines for Consultants Reporting on Contaminated Sites (OEH, 2011) • National Environment Protection (Assessment of Site Contamination) Measure (National Environment Protection Council, as amended 2013). **21. Hazards and Risk** • Provide: o a preliminary risk screening completed in accordance with *State Environmental Planning Policy No. 33 – Hazardous and Offensive Development* and *Applying SEPP 33* with clear indication of class (and any subsidiary hazard), quantity and location of all dangerous goods and hazardous materials associated with the development. Should the preliminary risk screening indicate that the development is "potentially hazardous" a Preliminary Hazard Analysis (PHA) must be prepared in accordance with *Hazardous Industry Planning Advisory Paper No. 6, 'Hazard Analysis'* and *Multi-Level Risk Assessment.* o a Preliminary Hazard Analysis, if required.

Plans and Documents	The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the Regulation. Provide these as part of the EIS rather than as separate documents. Any plans and diagrams included in the EIS must include key dimensions, RLs, scale bar and north point. In addition to the plans and documents required in the General Requirements and Key Issues sections above, the EIS must include the following: • Section 10.7(2) and (5) Planning Certificates (previously Section 149(2) and (5) Planning Certificate) • Design report to demonstrate how design quality would be achieved in accordance with the above Key Issues including: o architectural design statement o diagrams, structure plan, illustrations and drawings to clarify the design intent of the proposal o detailed site and context analysis o analysis of options considered to justify the proposed site planning and design approach o summary of feedback provided by GANSW and NSW State Design Review Panel (SDRP) and responses to this advice o summary report of consultation with the community and response to any feedback provided. • Geotechnical and Structural Report • Accessibility Report.
Consultation	During the preparation of the EIS, you must consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups, relevant special interest groups, including local Aboriginal land councils and registered Aboriginal stakeholders and affected landowners. In particular, you must consult with: • the relevant Council • Government Architect NSW (through the NSW SDRP process) • Transport for NSW. Consultation should commence as soon as practicable to inform the scope of investigation and progression of the proposed development. Target consultation in accordance with the draft Social Impact Assessment Guideline 2020 (Department of Planning, Industry and Environment) must also occur where there is a requirement to prepare and submit a Social Impact Assessment. The EIS must describe and evidence the consultation process and the issues raised and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.
Further consultation after 2 years	If you do not lodge a development application and EIS for the development within two years of the issue date of these SEARs, you must consult further with the Planning Secretary in relation to the preparation of the EIS.

References	The assessment of the key issues listed above must consider, but not be limited to, relevant guidelines, policies, and plans as identified.