URBIS

APPENDIX E - ENVIRONMENTAL RISK ASSESSMENT AND MITIGATION MEASURES

The following section provides recommendation for mitigation measures in response to potential impacts identified in **Section 6** of the EIS. The structure of mitigation measures is based on the DPIE's hierarchy of approaches for managing impacts identified in the *Draft Environmental Impact Assessment Guidance Series* released by DPE in June 2017, as:

- **Performance based measure** – identify performance criteria that must be complied with to achieve an appropriate environmental outcome but do not specify how the outcome is to be achieved.
- **Prescriptive measure** – require action to be taken or specify something that must not be done.
- **Management based measure** – identify one or more management objectives that must be achieved through the implementation of a management plan.

Following the implementation of appropriate mitigation measures as recommended, it is determined that the proposal will not result in any significant adverse impacts on the surrounding environment. The following table illustrates how the matters raised within the SEARs will be addressed.

This analysis comprises a qualitative assessment consistent with AS/NZS ISO 31000:2009 *Risk Management–Principles and Guidelines* (Standards Australia 2009). The level of risk was assessed by considering the potential impacts of the proposed development prior to application of any mitigation or management measures. In accordance with the SEARs, the Environmental Risk Assessment (ERA) addresses the following significant risk issues:

- The adequacy of baseline data;
- The potential cumulative impacts arising from other developments in the vicinity of the site; and
- Measures to avoid, minimise, offset the predicted impacts where necessary involving the preparation of detailed contingency plans for managing any significant risk to the environment.

Risk comprises the likelihood of an event occurring and the consequences of that event. For the proposal, the following descriptors were adopted for 'likelihood' and 'consequence'.

Likelihood		**Consequence**	
A	Almost certain	1	Widespread and/or irreversible impact
B	Likely	2	Extensive but reversible (within 2 years) impact or irreversible local impact
C	Possible	3	Local, acceptable or reversible impact

Likelihood		Consequence	
D	Unlikely	4	Local, reversible, short term (<3 months) impact
E	Rare	5	Local, reversible, short term (<1 month) impact

The risk levels for likely and potential impacts were derived using the following risk matrix.

		LIKELIHOOD				
		A	**B**	**C**	**D**	**E**
CONSEQUENCE	**1**	High	High	Medium	Low	Very low
	2	High	High	Medium	Low	Very low
	3	Medium	Medium	Medium	Low	Very low
	4	Low	Low	Low	Low	Very low
	5	Very low	Very low	Very low	Very low	Very low

The results of the environmental risk assessment for the proposed development are presented in the below table and are based upon the range of technical and specialist consultant reports appended to the EIS. The table has directly related mitigation measures responding to each impact also based upon the range of technical and specialist consultant reports appended to the EIS.

N.B. **'O' – Operational; 'C' – Construction**

'Pe' – Performance based mitigation measure; 'Pr' – Prescriptive based mitigation measure 'Ma' – Management based mitigation measure

SEARS	Potential Impact	Stage of Project	Likelihood	Consequence	Risk Level	Approach	Mitigation Measure (Pe/Pr/Ma)	Residual Impact
Traffic, Transport and Accessibility	Impacts on road network from construction and operational phase. Additional demand on car parking spaces.	C & O	D	3	Low	<u>Construction</u> The following measures should be implemented: ▪ A detailed CTMP should be prepared upon appointment of a Contractor where detailed construction traffic volumes and vehicles would be ascertained. ▪ As part of the Monitoring and Communications Strategies prepared as part of the CTMP, regular reviews will be undertaken by the on-site coordinator during implementation and execution of the CTMP. ▪ A Greet Travel Plan (GTP) should be prepared and finalised prior to occupation, the GTP should address the overarching requirements of the preliinary GTP prepared by Anson and submitted as part of the EIS. ▪ Traffic control would be required to manage and regulate traffic movements into and out of the Site during construction. ▪ Disruption to road users would be kept to a minimum by scheduling intensive delivery activities outside of peak network hours. ▪ Construction and delivery vehicles would be restricted to using Old Wallgrove Road and	Ma	Low

SEARS	Potential Impact	Stage of Project	Likelihood	Consequence	Risk Level	Approach	Mitigation Measure (Pe/Pr/Ma)	Residual Impact
						M7 Motorway; and Lenore Drive and Mamre Road. <u>Operation</u> The following measures should be implemented: ▪ Due to the shared nature of the hardstand, a Loading Dock Management Plan (LDMP) and Operational Traffic Management Plan (OTMP) is required to ensure the efficient and efficient operation of the site. Measures will also be included to ensure loading, unloading or servicing can be accommodated on the site to avoid queuing in the street network. These plans should be prepared prior to obtaining the Occupation Certificate (OC). ▪ Bicycle parking and end of trip facilities must be provided in accordance with the rate under the NSW Planning Guidelines for Walking and Cycling (Walking and Cycling. ▪ Driveway, ramp, onsite parking, accessible parking, bicycle parking and end of trip facilities should be designed in accordance with relevant Australian Standards.		
Noise and Vibration	Noise amenity impacts during	C & O	C	4	Low	**Construction** ▪ The use of standard mitigation measures provided in the Transport for NSW	Pr	Low

SEARS	Potential Impact	Stage of Project	Likelihood	Consequence	Risk Level	Approach	Mitigation Measure (Pe/Pr/Ma)	Residual Impact
	operations of load equipment and machinery.					Construction Noise and Vibration Guideline should be implemented during construction to minimise acoustic impact. ▪ A Construction Noise and Vibration Management Plan (CNVMP) should be prepared before any work begins. This should identify all potentially impacted receivers, assess the potential noise and vibration impacts from the proposal and provide details regarding how the impacts would be minimised through the use of all feasible and reasonable mitigation measures. The CNVMP should also contain procedures for handling complaints, should they occur, and detail any compliance monitoring requirements. **Operation** Where operational noise impacts from the development are predicted to exceed the relevant noise criteria, feasible and reasonable operational noise mitigation and management measures should be implemented, with the aim of reducing noise emissions to the relevant criteria. The potential feasible and reasonable mitigation measures that can be applied to the development are summarised in the Acoustic Report prepared by SLR dated July 2024.		

SEARS	Potential Impact	Stage of Project	Likelihood	Consequence	Risk Level	Approach	Mitigation Measure (Pe/Pr/Ma)	Residual Impact
						An Operational Noise Management Plan should be prepared subject to further refinement of these measures during detailed design when more details regarding specific tenants are known		
Air Quality	Emissions of fugitive dust during construction works	C	C	4	Low	Earthworks ▪ Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable. ▪ Use Hessian, mulches or trackifiers where it is not possible to revegetate or cover with topsoil, as soon as practicable. ▪ Only remove the cover in small areas during work and not all at once. Construction ▪ Avoid scabbling (roughening of concrete surfaces) if possible. ▪ Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place. ▪ Ensure bulk cement and other fine powder materials are delivered in enclosed tankers	Pr	Low

SEARS	Potential Impact	Stage of Project	Likelihood	Consequence	Risk Level	Approach	Mitigation Measure (Pe/Pr/Ma)	Residual Impact
						and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery. Trackout ▪ Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use. ▪ Avoid dry sweeping of large areas. ▪ Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport. ▪ Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable. ▪ Record all inspections of haul routes and any subsequent action in a site log book. ▪ Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned. ▪ Implement a wheel washing system (with rumble grids to dislodge accumulated dust		

SEARS	Potential Impact	Stage of Project	Likelihood	Consequence	Risk Level	Approach	Mitigation Measure (Pe/Pr/Ma)	Residual Impact
						and mud prior to leaving the site where reasonably practicable). ▪ Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits. ▪ Access gates to be located at least 10 m from receptors where possible.		
Visual Impacts	Visual amenity impacts to the surrounding receivers	O	D	3	Low	To help mitigate and soften the building particularly from visual receptors located in the north, northeast and northwest, the proposal should retain the proposed landscape setback. This should include indigenous and native canopy tree planting together with shrubs and groundcovers.	Pr	Low
Contamination	N/A							
Social impact	Negative social impacts to local health and wellbeing, local accessibility, way of life, community,	C & O	D	3	Low	▪ Implementation of a Construction Environmental Management Plan (CEMP) detailing compliance requirements. Provide community with information of the complaints procedure during construction. ▪ Implementation of Construction Noise and Vibration Management Plan (CNVMP) and a Operation Noise and Vibration Management Plan (ONVMP).	Pr. Ma	Low

SEARS	Potential Impact	Stage of Project	Likelihood	Consequence	Risk Level	Approach	Mitigation Measure (Pe/Pr/Ma)	Residual Impact
	and local engagement					▪ Effective communication and engagement with the community to minimise social anxiety and keep community well informed. ▪ Consider visual screening from public viewpoints. ▪ Implementation of a Construction Traffic Management Plan (CTMP) consistent with other approvals in the area. ▪ Implementation of an Operational Traffic Management Plan (OTMP) consistent with other approvals in the area. ▪ Keep the local community informed around the construction hours and any subsequent changes. ▪ Strategy in place to attract and maximise employment creation. ▪ Proactive and ongoing information sharing about the project and associated opportunities		
Biodiversity	N/A							
Aboriginal Heritage	Unexpected finds	C	D	3	Low	**Unexpected Archaeological Finds Procedure** - The following unexpected archaeological finds procedure should be followed in the unlikely event that any archaeological materials, or suspected	Pr	Low

SEARS	Potential Impact	Stage of Project	Likelihood	Consequence	Risk Level	Approach	Mitigation Measure (Pe/Pr/Ma)	Residual Impact
						archaeological materials, are uncovered during any works within the subject area: ▪ All works within the vicinity of the find must immediately stop and the location cordoned off with signage installed to stop any accidental impact to the finds. The find must not be moved 'out of the way' without assessment. ▪ The site supervisor or another nominated site representative must contact either the project archaeologist (if relevant) or Heritage NSW (Enviroline 131 555) to contact a suitably qualified archaeologist. ▪ The nominated archaeologist must examine the find, provide a preliminary assessment of significance, record the item and decide on appropriate management measures. Such management may require further consultation with Heritage NSW, preparation of a research design and archaeological investigation/salvage methodology and registration of the find with the Aboriginal Heritage Information Management System (AHIMS). Any management measures should be decided upon consultation with the RAPs. ▪ Depending on the significance of the find, reassessment of the archaeological potential		

SEARS	Potential Impact	Stage of Project	Likelihood	Consequence	Risk Level	Approach	Mitigation Measure (Pe/Pr/Ma)	Residual Impact
						of the subject area may be required and further archaeological investigation undertaken. ▪ Reporting may need to be prepared regarding the find and approved management strategies. ▪ Works in the vicinity of the find can only recommence upon receipt of approval from Heritage NSW. **Human Remains Procedure** - The following human remains procedure should be followed in the unlikely event that any human remains, or suspected human remains, are uncovered during any works within the subject area: ▪ All works within the vicinity of the find must immediately stop and the location cordoned off with signage installed to stop any accidental impact to the finds. ▪ The site supervisor or other nominated manager must notify the NSW Police and Heritage NSW (Enviroline 131 555). ▪ The find must be assessed by the NSW Police, which may include the assistance of a qualified forensic anthropologist.		

SEARS	Potential Impact	Stage of Project	Likelihood	Consequence	Risk Level	Approach	Mitigation Measure (Pe/Pr/Ma)	Residual Impact
						▪ Management recommendations are to be formulated by the NSW Police, Heritage NSW, site representatives and the RAPs. ▪ Works are not to recommence until the find has been appropriately managed.		
Environmental heritage	N/A							
Trees and Landscaping	Environmental amenity and biodiversity outcomes are not achieved. Adverse heat gain from direct sunlight.	O	D	3	Low	Water Sensitive Urban Design principles (WSUD) have been used to address considerations for efficient water use and design in the landscape.	Pr	Low
ESD	Unsustainable practices employed which adversely contribute to carbon emissions.	C & O	D	4	Low	ESD strategies outlined in the ESD reported prepared by E-Lab must be implemented during construction and operation phase of the development. The office component of this development is required to achieve the following NABERS Energy and Water ratings as committed under the NABERS Agreement prepared by E-Lab: ▪ 5.5 star NABERS energy rating and	Pr, Ma	Low

SEARS	Potential Impact	Stage of Project	Likelihood	Consequence	Risk Level	Approach	Mitigation Measure (Pe/Pr/Ma)	Residual Impact
						▪ 3 star NABERS water rating		
Geotechnical	soil salinity risks	C	D	4	Low	The field work for the current geotechnical and salinity investigation was conducted on12 July 2024 and 16 July 2024 and concluded that the materials used as controlled fill were predominantly slightly saline, except for one sample which returned a non-saline classification. Therefore no salinity management plan for this site is required.	Pr, Ma	Low
Water management	Impact on the existing drainage system and waterways through increased runoff and pollutants present in the stormwater.	C & O	D	4	Low	<u>Construction</u> During the construction phase, a Sediment and Erosion Control Plan will be in place to ensure the downstream drainage system and receiving waters are protected from sediment laden runoff. <u>Operation</u> To manage water quality and quantity, the proposed measures are incorporated into the development: ▪ Several OSD systems. ▪ On-lot treatment measures. ▪ Incorporate the principles of Water Sensitive Urban Design (WSUD) to target pollutants.	Pr, Ma	Low
Flood risk	N/A							

SEARS	Potential Impact	Stage of Project	Likelihood	Consequence	Risk Level	Approach	Mitigation Measure (Pe/Pr/Ma)	Residual Impact
Waste	Waste generated by the development is not appropriately handled, stored, or collected.	C & O	D	4	Low	<u>Construction waste management:</u> The Building Contractor, Building Designer and/or those in equivalent roles should follow better practice waste avoidance strategies outlined in the WMP. Effective management of construction materials and waste, including options for reuse and recycling where applicable and practicable, will be conducted. Only waste that cannot be cost effectively reused or recycled is to be sent to landfill or appropriate disposal facilities. Waste materials produced from construction activities will be separated at the source and stored separately on-site. A more detailed construction waste management plan will be prepared that will provide further information on waste storage on site during construction. <u>Operation waste management:</u> The following operational waste management strategies are proposed: ▪ Waste avoidance measures ▪ Possible re-use opportunities include establishing systems with in-house and supply chain stakeholders to transport	Ma	Low

SEARS	Potential Impact	Stage of Project	Likelihood	Consequence	Risk Level	Approach	Mitigation Measure (Pe/Pr/Ma)	Residual Impact
						products in re-useable packaging where possible. ▪ maximise recycling opportunities ▪ Education and communication on waste management initiatives and measures will be regularly and clearly conveyed to staff, cleaners and visitors ▪ Signs which clearly identify waste management procedures and provisions to contractors, staff and visitors will be posted at the Development as appropriate. ▪ Roles and Responsibilities of implement the operational measures		
Bushfire	N/A							