APPENDIX D - 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
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

SEAR	Potential Impact	Stage of Project	Likelihood	Consequence	Risk Level	Approach	Mitigation Measure (Pe/Pr/Ma)	Residual Impact
Traffic and Transport	Impacts on road network from construction and operational phase. Additional demand on car parking spaces.	C & O	D	4	Low	Traffic control would be required to manage and regulate construction vehicle traffic movements to and from the site during construction.	Ma	Low
Noise and Vibration	Adverse noise generation during construction on surrounding neighbours.	C	C	3	Low	The proposed development will implement the best practice measures recommended in Table 20 of the Noise and Vibration Assessment prepared SLR. These measures include: ▪ Ensure highly noisy intensive works are undertaken during the scheduled construction hours and provide appropriate respite periods during periods of high noise impacts. ▪ The site entry and exit points and stationary sources of noise are to be located away from sensitive receivers. ▪ Work areas are to be one way to minimise the need to reverse. ▪ Training is to be provided to relevant sub-contractors, on noise and vibration requirements and the location of sensitive receivers during inductions and toolbox talks. ▪ Truck drivers should avoid compression braking as far as practicable and use broadband reversing alarms where night-time work is required. ▪ Incorporate noise source mitigation measures such as using low impact construction techniques, shutting down machinery when not in operation, avoid dropping materials from a height and fit out all machinery with noise control devices. ▪ Engage in community consultation by providing appropriate notice to the affected sensitive receivers before noisy period of work, provide signage with a 24 hour contact number and review complaints and implement additional measures where feasible. ▪ Continue to conduct noise and vibration monitoring in response to valid complaints received.	Pr	Low
	Noise emissions associated with operation of the processing facility and additional traffic noise.	O	C	3	Low	No specific mitigation measures are required to manage operational noise emissions.	N/A	Low
Air Quality and Odour	Adverse air emissions generation during construction on surrounding neighbours.	C	C	4	Low	Best practice dust controls have been recommended during the construction works to minimise potential impacts on the surrounding commercial and industrial activities. The measures are detailed in Table 19 of the Air Quality and Odour Assessment prepared by SLR and include the following practices: ▪ Communication management	Pe, Ma	Low

SEAR	Potential Impact	Stage of Project	Likelihood	Consequence	Risk Level	Approach	Mitigation Measure (Pe/Pr/Ma)	Residual Impact
						▪ Record or all complaints and incidents ▪ Regular site inspections ▪ Management of machinery and barrier locations and construction techniques / methods ▪ Management of vehicle idling and usage		
	Air and odour emissions associated with operation of the processing facility.	O	C	3	Low	The following mitigation measures are proposed as part of the operation phase: ▪ Discharges of pollutants to the air from the majority of potentially odorous activities (ovens and production areas) will be captured by BCA and AS standard compliant extraction systems and directed to rooftop vents. ▪ Containment measures for spillages will be provided at appropriate locations in the expansion area to reduce odorous emissions from waste spillages. ▪ The good housekeeping observed during the site visit will continue to be maintained on all areas of the Site, including regular cleaning of all internal and external areas. ▪ Organic waste and general waste will be removed from site for off-site disposal on a daily basis, Monday to Friday. In addition: – All generated waste will be identified and separated into common material streams or categories at the point of generation for separate collection. This ensures that any waste that has the potential to cause odour emissions is dealt with appropriately. – All organic waste will be stored in closed containers and away from direct sun. – All putrescible waste materials will be covered during transport. ▪ Signage will be provided in waste management and processing areas to provide information relating to general housekeeping requirements and to act as a daily reminder to staff working at the premises. ▪ The physical controls (including ventilation fans, exhaust stacks, extraction hoods, grease traps, air pollution control devices etc.) are/will be designed to allow for easy and safe cleaning and maintenance. Regular cleaning of physical controls is and will be undertaken as per manufacturer's requirements. ▪ BCA/AS standard compliant extraction systems are being designed for the Project in order to extract emissions and discharge them to atmosphere via dedicated discharge vents. Air pollution control devices may be implemented to further reduce emissions where complaints are received in relation to nuisance odour or where prolonged smoke is visible during normal or peak operations (i.e. not during start up or shut down). ▪ Signage should be displayed to remind drivers to turn off vehicle engines when idling at the Site for longer than 1 minute to minimise exhaust emissions. ▪ General environmental awareness training should be provided to relevant staff and contractors, including: – Potential air quality and odour impacts that may be caused by activity during normal and abnormal circumstances;	Pr, Ma	Low

SEAR	Potential Impact	Stage of Project	Likelihood	Consequence	Risk Level	Approach	Mitigation Measure (Pe/Pr/Ma)	Residual Impact
						– Prevention of accidental air emissions and actions to be taken when accidental emissions occur; – Efficient and appropriate use and maintenance of equipment used on the Site (where relevant to their role); and – Procedures for complaint handling. ▪ All staff and contractors should be instructed to report any undue pollutant release (including odour) and visible emissions from the exhaust vents to the Site manager. ▪ In order to reduce the company's overall carbon footprint and combustion gas emissions generated by vehicles, it is recommended that commuting to work using sustainable modes of travel (such as public transport, cycling, and car share) be encouraged through the implementation of an incentive scheme and that facilities for cyclists such as bike storage areas, showers and lockers be provided.		
Visual Impacts	Built form scale and appearance will be readily visible when viewed from key public vantage points.	O	B	4	Low	Proposed visual impact mitigation in the form of tree planting across the site and the inclusion of partial green walls to the majority of the road frontages.	Ma	Low
Hazard and Risk	Storage and transport of dangerous goods	O	C	3	Medium	The following recommendations were made in regard to storing DGs as to minimise any hazard and risk: ▪ The documentation required by the Work Health and Safety Regulation 2017 applicable to a placard site shall be prepared and stored on file at the site. ▪ The appropriate placards for storages exceeding placard quantity as defined in the Work Health and Safety Regulation 2017 shall be affixed to the applicable storages.	Pr	Low
Contamination	Potential contamination sources or area of environmental concern (AEC) within site	C	C	3	Medium	A Detailed Site Investigation (DSI) is required to establish whether the site is suitable in its current state without the need for remediation, or whether remediation is required.	Pr	Low
Salinity	Identified saline soils across the proposed development area with levels of salinity that varied with depth	C	C	3	Medium	A Salinity Management Plan should be prepared in accordance with the amended Salinity Code of Practice to outline measures to be implemented to reduce the risks associated with salinity at the site.	Pr	Low
Biodiversity	Unnecessary removal or damage to the threatened species	C	D	3	Low	Develop and implement a Construction Environmental Management Plan that includes: ▪ Tree protection measures recommended in the Arboricultural Impact Assessment prepared by Truth About Trees (2021), consistent with Australian Standard AS4970-2009 Protection of Trees on Development Site.s ▪ Soil erosion and sediment controls.	Pr	Low
Tree removal	Construction impacts on retained trees at the site.	C	C	3	Medium	Specific mitigation measures to protect the retained trees during the construction phase are summarised below: ▪ A project Arborist with a minimum of AQF Level 5 certification is to be appointed prior to site establishment, demolition, or any site activities.	Pr	Low

SEAR	Potential Impact	Stage of Project	Likelihood	Consequence	Risk Level	Approach	Mitigation Measure (Pe/Pr/Ma)	Residual Impact
						▪ The project Arborist is to certify the installation of tree protection fencing, which is to be installed in the approximate locations as shown in Appendix 2 of the AIA and maintained in good order throughout the development process. ▪ Where works to modify the existing sewer manholes conflict with the TPZs of retained trees (#169 and #218), the excavation must be carried out using non-destructive means i.e hand-digging or vacuum excavation, under the direct supervision of the project Arborist. ▪ Any demolition, excavation or work activity within the TPZ of a retained tree is to be supervised and certified by the project Arborist. ▪ The supervising Arborist is to identify any significant tree roots which are present and ensure their protection. ▪ Tree roots greater than 40mm in diameter are to be retained and protected throughout the development. ▪ Tree roots less than 40mm in diameter may be severed cleanly by the project Arborist if deemed appropriate. ▪ All other tree protection measures must be installed and maintained in accordance with Appendix 2 of the AIA and AS4970-2009-The Protection of Trees on Development Sites.		
Aboriginal Heritage	Disturbance to sub-surface objects and artefacts	C & O	E	5	Very Low	The following mitigation measures have been identified for the construction of the proposed development: (a) Although considered highly unlikely, should any archaeological deposits be uncovered during any site works, a procedure must be implemented. The following steps must be carried out: (b) All works stop in the vicinity of the find. The find must not be moved 'out of the way' without assessment. (c) Site supervisor, or another nominated site representative must contact either the project archaeologist (if relevant) or Department of Premier and Cabinet (DPC) to contact a suitably qualified archaeologist. (d) The nominated archaeologist examines the find, provides a preliminary assessment of significance, records the item and decides on appropriate management, in conjunction with the RAPs for the project. Such management may require further consultation with DPC, preparation of a research design and archaeological investigation/salvage methodology and preparation of AHIMS Site Card. (e) Depending on the significance of the find, reassessment of the archaeological potential of the subject area may be required, and further archaeological investigation undertaken. (f) Reporting may need to be prepared regarding the find and approved management strategies. Any such documentation should be appended to this ACHAR and revised accordingly. (g) Works in the vicinity of the find can only recommence upon relevant approvals from DPC. In the unlikely event that human remains are uncovered during any site works, the following must be undertaken: (a) All works within the vicinity of the find immediately stop. (b) Site supervisor or other nominated manager must notify the NSW Police and DPC.	Ma	Very Low

SEAR	Potential Impact	Stage of Project	Likelihood	Consequence	Risk Level	Approach	Mitigation Measure (Pe/Pr/Ma)	Residual Impact
						(c) The find must be assessed by the NSW Police, and may include the assistance of a qualified forensic anthropologist. (d) Management recommendations are to be formulated by the Police, DPC and site representatives. (e) Works are not to recommence until the find has been appropriately managed.		