

Appendix D - Ongoing Mitigation Measures

Table 19 Ongoing Mitigation Measures

Consultant	Mitigation Measure
Design and Operation	
Engagement	
Sarah George Consulting	Ongoing engagement with the community is to be undertaken
Geotechnic Investigation	
JKGeotechnics	A pre-construction meeting should be held so that all parties involved understand the earthworks requirements and potential difficulties. This meeting should clearly define the lines of communication and responsibility.
	A waste classification is required for any soil and/or bedrock excavated from the site prior to offsite disposal. Subject to the appropriate testing, material can be classified as Virgin Excavated Natural Material (VENM), Excavated Natural Material (ENM), General Solid, Restricted Solid or Hazardous Waste. If contamination is encountered, then substantial further testing (and associated delays) may be undertaken, this should be addressed prior to the commencement of excavation on site.
Construction Management	
Aboriginal Cultural Heritage	
Regal Heritage	All site workers and contractors should be inducted to the area and informed of their obligations under the National Parks and Wildlife Act 1974.
	In the unlikely event that an Aboriginal object is found, temporary fencing must be placed around the object with a buffer of at least 10 m. An appropriately qualified archaeologist should be engaged to assess the finding. Should the object be determined to be an Aboriginal object Heritage NSW must be informed and an Aboriginal Site Recording Form submitted to AHIMS in accordance with S89A of the National Parks and Wildlife Act 1974 Works should not proceed until advice is received from Heritage NSW.
	In the unlikely event that suspected human remains are encountered during construction, all works should cease immediately and: • The location, including a 10 m buffer should be secured using a barrier to avoid further disturbance; • The NSW Police should be contacted immediately; • No further action is to be undertaken until the NSW Police provide advice that it is safe to do so; • If skeletal remains are identified as being Aboriginal, the proponent or their agent must contact Heritage NSW via the Environment Line on 131 555, and representatives of the Deerubbin Local Aboriginal Land Council, and; • No works are to continue until Heritage NSW provides notification to The Proponent or their agent.
Waste Management	
Elephants Foot Consulting	Reuse excavated material on site where practical or recycle of site where practical.
	Dispose of asbestos, hazardous waste and intractable waste safely in accordance with SafeWork NSW and EPA requirements
	Implement the approved Construction Waste Management Plan throughout all construction stages
	Appoint the construction contractor as the party primarily responsible for implementing the Construction Waste Management Plan and ensure all site personnel comply with its requirements.
	Undertake site-specific inductions for all staff and contractors on waste management procedures before commencement of works.
	Keep records of waste generation, reuse, recycling and disposal, including receipts and waste contractor dockets.
	Conduct inspections and waste audits during construction and provide further staff training or updated signage where required.
Social Impact	
Sarah George Consulting	Implement recommendations included in the Noise Impact Assessment.
	Prepare a Construction Noise and Vibration Plan prior to CC.
	Implement recommendations in the Transport Impact Assessment.
	Propose architectural window treatments at detailed design state to maintain privacy to neighbours.
	Apply CPTED principles at the detailed design stage
Arboricultural Impacts	
Arbor Express	Tree protection plan must be implemented.
	Tree protection fencing must be placed around Tree Protection Zones, where viable, of Trees 1-7, 10-34 and 37.

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	All trees to be retained must be protected in accordance with AS 4970-2025.
	No over-excavation shall be undertaken beyond the footprint of any structure unless approved by the Project Arborist.
	Trees 8, 9, 35 and 36 are located within the footprint of the development and must be removed.
Acoustics and Vibration	
E-LAB	Noise – Project Specific - At least a one-hour respite period should be offered per day during the most intensive periods of noisy activities. Limiting these activities outside of sensitive hours (e.g. no noisy works, such as piling, between 7:00am – 8:00am on weekdays) should also be considered. - For exceedances of less than 3dB(A), careful selection and maintenance of plant equipment will ensure - that disruptions to adjacent receivers are minimised. - A Community Consultation Strategy is to be developed by the contractor. Noise – General - Increase distance between noise sources and sensitive receivers. - Reduce the line-of-sight noise transmission to residences or other sensitive land uses using temporary barriers including stockpiles, shipping containers). - Construct and install purpose-built noise barriers in the early project design. - Any craneage will be limited to mobile crane where the engines are typically enclosed in acoustically treated housing. - Consideration of alternative warning alarms rather than the traditional ‘beeper’. Vibration - Vibration monitoring is to be undertaken at surrounding sensitive receivers. - Reasonable and feasible measures should be considered to lessen the impact, such as alternative methods or equipment for activities which are causing complaints to achieve the vibration levels required. - Dilapidation reports are to be prepared on surrounding sensitive receivers and building in close proximity to heavy machinery prior to CC. Noise and Vibration Monitoring Strategy Develop a noise and vibration monitoring strategy which will cover the short and long term and will be integrated into a Construction Noise and Vibration Management Sub-Plan once construction plans and methodologies are available and a contractor is appointed. This will also entail metro infrastructure specific monitoring which will be coordinated with the relevant consultants and approved by Sydney Metro.
BDAR	
Thrive Ecology	In the event that unexpected threatened species are identified during the project with potential to be impacted, works should cease and an ecologist should be contacted for advice. Landscaping and building lighting are to be designed to prevent light spill into the vegetated riparian corridor. No lighting is to be directed toward or illuminate the riparian corridor. Erosion and sediment control measures are to be implemented and maintained throughout the construction phase in accordance with an approved sediment and erosion control plan to prevent impacts to the riparian corridor and stormwater system. No dewatering or discharge of water is to occur into the adjacent riparian corridor. Inductions must include an ecological component making all on site workers aware of the sensitivity of the vegetation within the adjacent riparian corridor and the requirements to protect it.
Contamination	
Foundation Earth Sciences	Any soil requiring removal from the site, as part of future site works, should be classified in accordance with the “Waste Classification Guidelines, Part 1: Classifying Waste” NSW EPA (2014). An Unexpected Finds Protocol is to be followed during the bulk excavation works.
Construction and Environmental Management	
Foundation Earth Sciences	Minimal wind-borne dust is to leave the confines of the site. Water containing any suspended matter or contaminants is to be managed within the confines of the site in such a manner that minimal pollution of adjacent sites including waterways occurs. Vehicles will be controlled such that minimal mud, soil or water will fall or be deposited on any public or private roadway or adjacent areas. Noise and vibration levels at the site boundary will comply with the required legislative requirements. All approvals for the site works are to be under regulatory framework SEPP55 forming the basis of the remedial scope that council abides by.

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	All environmental controls set by the Environmental Representative are to be adhered to.
	In the case of there being asbestos containing material on the site, the site owner and contractor is to provide at least 2 working days' notice before commencement, signage which should include the date, time and removal details.
	Asbestos containing material should not be further damaged or impacted during site works in order to prevent release of fibres.
	In the event of any previously unidentified asbestos contamination being detected notification to the On-Site Environmental Engineer/Hygienist is to be given immediately.
	Where there is immediate risk to workers health and safety in the removal of asbestos containing materials, all works are to cease until appropriate safety measures can be implemented.
	A contractor with a Friable Asbestos license (Class A) should be engaged to move/remove any asbestos containing materials from within the site.
	The licensed contractor with suitable experience is to prepare an Asbestos Removal Control Plan and a Safe Works Method Statement.
	If asbestos contamination was identified in a specified area, an exclusion zone with appropriate restriction and warning signs should be created so that no unauthorised persons can enter the exclusion area.
	Appropriate decontamination areas are to be designated for workers prior to exiting the contaminated exclusion zone(s) with disposable coveralls to be appropriately disposed of within the contamination area prior to leaving the exclusion zone.
	All staff working within the exclusion zone will use personal protective equipment in accordance with relevant Australian Standards.
	Once contaminated materials are loaded, all machinery is to be vacuumed and hosed down and wiped within the decontamination zone.
	In the event that residual asbestos obscured by the former building is uncovered during demolition, it should be wetted down and removed as per the rest of the site.
	Licensed trucks under appropriate methods of dust avoidance and covered with double lined polyurethane plastic are to transport asbestos material from areas within the exclusion zone to a licensed landfill with appropriate classification.
	Inspection from a qualified environmental/occupational hygienist once removal work has been completed to confirm that all asbestos materials have been removed completely from the works area.
	A clearance certificate is to be prepared by an independent and suitably qualified environmental/occupational hygienist.
	For the clean-up period all contractor personnel working at any time in the vicinity of removed asbestos materials are to wear personal protective equipment including: • safety boots meeting AS 2210, • hard hats meeting AS 1801 (when working near equipment), • gloves meeting AS 2162 (when appropriate), • hearing protection meeting AS 1270 (when working near equipment), • long sleeved shirts, buttoned to the wrist, and long trousers (when working near excavated materials that have not being identified to be contaminated), • disposable Tyvec Suits (chemical resistant overalls) to be worn for persons coming into physical contact with contaminated materials, • where a risk is present to sight, safety eyewear and shields meeting AS 1337, • Respiratory Protection in accordance with AS/NZS 1715:1994, • maintain personal hygiene practices. Personnel must always wear PPE in areas where exposure risk is unknown.
	Demolition works are to be completed in accordance with SafeWork NSW Standards, Codes of Practice and council DA requirements. Any asbestos identified within the building materials should be managed in accordance with the SafeWork NSW Codes of Practice and Australian Standards.
	The management of the material leaving the site is to be monitored by the principal's environmental representative, who will record the details of these materials.
	The contractor is to install a vehicle wheel washing or shaking facility and must manage all vehicles as indicated by the principal's environmental representative (FES) to minimise tracking of any materials onto public roads.
	The contractor is to put in place adequate stormwater runoff, run-on and sediment control measures for the remedial works.

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	These include stockpiling any excavated soil in a manner that will prevent contamination from being transported off-site by stormwater, and include the following measures: - divert stormwater runoff outside the site so that it does not flow through the site, - control drainage on the site by intercepting and redirecting runoff in a controlled manner, - stormwater collected at the site in trenches and sumps should be appropriately managed, and - silt stop fences should be erected at locations where stormwater may flow outside the site.
	Soils that require stockpiling must be managed in such a manner that these materials remain well contained and easily identifiable and that the effects of wind and rain have minimal impact on their integrity. Subsequently, if adverse weather conditions are anticipated, or if the stockpile is to remain on-site for an extended period, stockpiles must be protected and covered.
	Any plant or equipment that comes into contact with soils must be inspected prior to leaving the site, and cleaned as necessary.
	If groundwater is encountered during excavation works, the groundwater is to be directed to and collected in trenches and sumps. No discharge of groundwater will occur without approval of appropriate regulatory bodies.
	Any stockpiles created should be managed to minimise the risk of dust generation, erosion and leaching. The measures required to achieve this should include: - restrict the height of stockpiles to reduce dust generation, - construct erosion, sediment and runoff control measures, - cover stockpiles of contaminated soils to be left on site for more than 24 hours, or if windy conditions are expected, - manage the potential for leaching.
	The contractor is to ensure that adequate barriers have been placed around the site to prevent access of unauthorised personnel to areas where contaminated material is exposed.
	If work is required other than ordinary working weekdays or outside regular working hours, the contractor or any subcontractor is to give due notice of the intention to do so and obtain prior approval of the site owner.
	Temporary fence is to be installed for full perimeter, and gate is to be locked with chain. Mobile security cameras are to also be set for all entry points.
	Importation of any soil, rock or aggregate must be legally able to be imported onto the site, must be classified as Virgin Excavated Natural Material, Excavated Natural Material or other materials legally able to be imported onto the site based on a Resource Recovery Exemptions. Prior to importation appropriate documentation needs to be approved by the Environmental Consultant and the materials must be inspected at the source site. The material must be inspected during importation by the Contractor and any materials not meeting the description will be rejected.
	Removal of waste materials from the site is only to be carried out by a licensed contractor holding appropriate licence, consent and/ or approvals to dispose of the waste materials according to the assigned waste classification.
	A site log shall be maintained by the Contractor to track disposed loads against on-site origin. Transport of spoil shall be via a clearly delineated, pre-defined haul route. Details of all soils removed from the site (including VENM) shall be documented by the Contractor and provided to the Environmental Consultant and/or the NSW EPA Accredited Site Auditor.
	Asbestos transporters and facilities receiving asbestos waste in NSW weighing more than 100 kilograms or consisting of more than 10m2 of asbestos sheeting in one load must track and report this waste to NSW EPA using WasteLocate.
	Removal of waste materials from the site shall only be carried out by a licensed contractor holding appropriate licence, consent and/ or approvals to dispose of the waste materials according to the assigned waste classification.
	Prior to the removal of any hazardous waste to a suitable licensed facility any hazardous waste is immobilised in accordance with the terms of any general immobilisation approval or specific immobilisation approval. Any immobilised waste that is transported is tracked using the EPA's online waste tracking system.
	The contractor is to divert stormwater runoff outside the site so that it does not flow through the site and control drainage on the site by interception and redirect runoff in a controlled manner. Stormwater collected from the site in trenches and sumps is to be appropriately managed and any Remedial Stockpiles are to be appropriately bunded so as not to allow contaminants to escape into other areas. Silt stop fences are to be erected at locations where stormwater may flow from the site and where areas of heavy erosion may be likely.
	No surface waters are to be allowed to be removed from site unless appropriate approvals have been attained from regulators.
	Water sprays are to be used to ensure suppression of dust on all excavated areas and whilst loading of waste type materials. Water used for dust suppression will not be allowed to escape off-site by the stormwater system, sewer, or any other means.

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	The contractor must ensure that adequate barriers have been placed around any protection areas and/or follow the landscaping / rehabilitation requirements outlined in the approved DA. The contractor is to also place adequate warning signs around the site where required.
	Any unexpected Underground Storage Tanks found within the site should be removed in accordance with SafeWork NSW & UPSS Regulation 2014 requirements, and AS4897-2008.
	The minimum sampling protocols to be used for unexpected UST areas include: • 3 samples per backfill UST sands per UST pit; • 1 sample per tank line; • 1 sample per vent pipe area; • 1 sample per spill box (currently not present but may be found); • 2 base samples and 8 walls (2 samples per wall face) of each tank pit.
	A site management plan is required with any cap and contain strategy.
	As personnel on-site may be exposed to potentially toxic or hazardous compounds, the Contractor is to prepare a site-specific Work Health and Safety Plan (WHS) prior to commencement of remediation and validation work in accordance with relevant legislation. The WHS is to identify hazards, assess the risks posed by the hazards and recommend measures to control the hazards.
	All staff working on the site must be inducted and must sign the relevant authority form. The contractor is to comply with all statutory requirements for safety. All accidents must be reported to the principal's environmental representative.
	As part of the construction process, construction material including packaging container off-cuts, surplus items and spoiled material are to be accumulated. These materials must be reused, recycled or disposed of in the appropriate manner.
	As part of any operation, waste material and other general refuse accumulate in the general working areas. These must be maintained to avoid nuisance and health concerns. Waste bins are to be provided on site for general refuse and it is to be the site foreman's responsibility to maintain site cleanliness by firstly making it aware to all contractors and secondly enforcing this CEMP.
	The development program is to be undertaken with all due regard to the environment and to statutory requirements.
	The development of the site will comply with the environmental requirements of the following: • Protection of the Environment Operations Act, • Hazardous Chemicals Act, • Waste Avoidance and Resource Recovery Act, • Environmentally Hazardous Chemicals Act, • Dangerous Goods Act, • Noise Control Act, • Construction Safety Act. In particular, in addition to any statutory compliance's required by the above mentioned Acts, the contractor will be responsible for carrying out environmental compliance with all due care to ensure that the following conditions are specifically complied with: • minimal wind borne dust leaves the confines of the site, • water containing any suspended matter or contaminants is managed within the confines of the site in such a manner that minimal pollution of adjacent sites, including waterways, occurs, • vehicles will be controlled such that minimal mud, soil or water will fall or be deposited on any public or private roadway or adjacent areas, • noise levels at the site boundary will comply with the required legislative requirements. The principal's environmental representative (Foundation Earth Sciences) can ensure that the contractor's site manager/foreman is conversant with the contents of any CEMP and that he will ensure that each employee or sub-contractor employed by the contractor is familiarised with the requirements.
	If during works, significant odours and/or evidence of gross contamination not previously detected are encountered, or any other significant unexpected occurrence, site works are to cease in that area, at least temporarily, and immediate action taken to abate the odours or prevent / manage cross-contamination occurring.
	The sampling strategy for each "unexpected find" is to be designed by a suitably qualified environmental consultant. The sampling frequency of the identified substance / materials shall meet the following minimum requirements: • Excavation Floor • 1 sample every 25m² • Samples should be analysed for the chemicals of concern. • Excavation Wall • 1 sample every 5m (from each distinct horizon / material type)

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	Samples should be analysed for the chemicals of concern.