

Appendix C – Project Mitigation Measures

The collective measures required to mitigate the impacts associated with the proposed works are detailed below. These measures have been derived from the assessment in Section 6.0 of the EIS and those detailed in appended consultants' reports.

Ref No.	Potential Impact	Stage of Project	Mitigation Measure
Noise and Vibration Impact Assessment			
NV-1	To control operational noise emission from the proposed development the following mitigation measures are proposed:	Design	- Acoustic design to be undertaken during CC for all mechanical plant to be installed and appropriate acoustic treatments incorporated, where required, to meet the noise emission objectives presented in Section 6.1. - Acoustic barrier to be provided to rooftop plant decks.
NV-2	To control traffic noise intrusion to the proposed development the following mitigation measures are proposed:	Design	- Appropriate building envelope construction including minimum glazing thicknesses as outlined in Sections 8.2.2.2 and 8.2.2.3 Noise report. - Provision of alternative ventilation as outlined in Section 8.2.2.5 of Noise report.
NV-3	To control noise emission from outdoor communal areas the following mitigation measures are proposed:	Design	- Design of the outdoor communal areas to limit the size of congregations - Design of the rooftop outdoor communal areas to increase setbacks
NV-4	For the activities identified as potentially exceeding recommended construction noise levels, the most effective mitigation investigation strategy is likely to be:	Construction	- Select the quietest plant/activity available (or retrofit acoustic treatment to the plant such as residential class mufflers) to minimise any risk of exceeding the recommended construction noise levels. - If any residual exceedances, investigate the use of additional barriers to screen the affected receivers. Barriers should be constructed (or otherwise provided using site sheds, hoardings, etc) along the eastern and western boundary of the site. The barriers should be generally imperforate and constructed of plywood, or other similar material. It is noted it may not be practical to install a barrier to the site access gate to the site. - If any remaining residual significant exceedances, investigate time restrictions (e.g. avoiding loud early morning works at the residences) and respite periods and notify affected receivers when works likely to exceed the recommended construction noise levels is likely to occur.
NV-5	Quiet work methods/technologies	Construction	- As much as practical, use of quieter excavation methods should be adopted such as ripping, and slow pressure and speed of boring drill if ground conditions permit. - Excavation is to be conducted through the use of an excavator with a bucket where feasible as this would be the quietest excavation method.

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			Ripping techniques should also be adopted when operating close to structures in the event that vibration management levels are exceeded. Concrete pump trucks should generally be located as far as possible from the western boundary (residential receivers) of the site or within the bounds of the site.
NV-6	Contractors/Sub-contractors	Construction	Contractors/Sub-contractors should be made aware of the requirements to minimise noise and vibration emissions and other requirements of the Project Construction Noise and Vibration Management Plan and include allowances in their methodologies, management, costs, etc in their tender.
NV-7	Level of monitoring	Construction	- The recommended minimum level of monitoring is recommended below. Additional monitoring may be required in response to complaints, site conditions, etc - Vibration monitoring is recommended at the western and eastern boundaries of receivers during the following activities: - Jackhammering - Excavator mounted hammering - Hydraulic hammering - Piling - Precise monitoring locations are to be determined during installation and monitors are to be moved periodically where feasible to align with the progress of works so that the monitor location represents the worst affected locations.
NV-8	Operational noise emission	Operation	To control operational noise emission from the proposed development to meet the established objectives, the following mitigation measures are proposed: Loading Dock - Restrict hours of operation to day only (7:00 am to 6:00 pm) - Minimise the use of air brakes - Minimise the use of tonal reverse alarms Retail Use - Restrict hours of operation to 7:00 am to 10:00 pm
Geotechnical			
G-1	Dilapidation	Construction	Prior to excavation and construction, we recommend that detailed dilapidation surveys be carried out on all structures and infrastructures

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			surrounding the site that falls within the zone of influence of the excavation to allow assessment of the recommended vibration limits. • The zone of influence of the excavation is defined by a distance back from the excavation perimeter of twice the total depth of the excavation. • The reports would provide a record of existing conditions prior to commencement of the work. A copy of each report should be provided to the adjoining property owner who should be asked to confirm that it represents a fair assessment of existing conditions. The reports should be carefully reviewed prior to demolition and construction.
G-2	Existing Footings	Design Construction	• EI Australia attended site with Coronation on Friday 11 July to undertake test pitting on site along the western elevation of 1A Bourke Street to investigate and observe the building's footings. • Three test pits were dug along the western elevation, and one test pit was dug beneath the building's southwest corner. • Shallow concrete footings were observed beneath the brick masonry wall in all pits to depths of between 0.2 and 0.8m Below Existing Ground Level (BEGL), with brick or concrete stepping out up to 200mm in some pits. Footings were dug beneath in search of pile foundations, but none were observed. • Additionally, whilst test pitting, a relic linear concrete structure was encountered at roughly 0.6m BEGL, approximately 1m west of the existing building in all four test pits. This was approximately 750mm wide and 600mm thick, making its base approximately 1.2m BEGL. This structure was inferred to be connected between pit exposures and deemed to be an historic shallow foundation.
G-3	Excavation Assessment	Construction Design	Prior to any excavation commencing, we recommend that reference be made to the Safe Work Australia Excavation Work Code of Practice, dated January 2020. For the Stage 1 area (Parcels 1 and 4), EI understands the development will require: • A BEL of approximately RL 19.5 m for the lowest basement level • Excavation depths up to approximately 9.7 m BEGL For the Stage 2 area (Parcels 2 and 3), EI understands the development will require: • A BEL of approximately RL 20.2 m for the basement at Parcel 3 • Excavation depths up to approximately 8.85 m BEGL • Locally deeper excavations for footings, service trenches, crane pads and lifts overrun pits may be required for both Stage 1 and 2 areas. Based on the

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			borehole logs, the proposed basement excavations will therefore extend through Unit 1 and be founded in either Unit 2 or Unit 3 in the northwest (Stage 1, Parcel 1), and Unit 4, Unit 5, or Unit 6 in the rest of the site. Competent bedrock becomes shallower towards the southeast (Stage 1 Parcel 4 and Stage 2 Parcel 3). As such, an engineered retention system must be installed prior to excavation commencing. Based on the borehole logs, the proposed basement excavations will therefore extend through Unit 1 and be founded in either Unit 2 or Unit 3 in the northwest (Stage 1, Parcel 1), and Unit 4, Unit 5, or Unit 6 in the rest of the site as outlined in Table 3-2 above. Competent bedrock becomes shallower towards the southeast (Stage 1 Parcel 4 and Stage 2 Parcel 3). As such, an engineered retention system must be installed prior to excavation commencing. Units 1, 2, 3, and 4 can be excavated using buckets of large earthmoving Hydraulic Excavators, particularly if fitted with 'Tiger Teeth' for excavations in Unit 4 (Class V sandstone). Excavation of Units 5 and 6 (where encountered) may present hard or heavy ripping, or "hard rock" excavation conditions. Ripping would require a high capacity and heavy bulldozer for effective production. • Wear and tear should also be allowed for. The use of a smaller size bulldozer will result in lower productivity and higher wear and tear, and this should be allowed for. Alternatively, hydraulic rock breakers, rock saws, ripping hooks or rotary grinders could be used, though productivity would be lower and equipment wear increased, and this should be allowed for. • The primary issues associated with the excavation will be controlling the groundwater and provide adequate support to adjoining structures. Groundwater is expected to be encountered during excavation. Therefore, to allow for the construction of the basement slab, lift pits and service trenches in 'dry' condition, temporary dewatering will be required. In this regards, it is anticipated that the groundwater table will be maintained at a depth of about 1 m below the bulk excavation level and potentially deeper around lift pits or working platforms (if required). • Placement of a course of recycled aggregates above the excavation floor may assist trafficability during basement earthworks • Dewatering has the potential to cause some drawdown and ground settlement below the adjoining sites; the extent of the drawdown depends upon the depth to which the cut-off system is installed and the pumping operations. A dewatering assessment is required to inform design of the cut-off system and evaluation of dewatering induced ground settlements beyond the excavation boundary. Outlets into the stormwater system will require Council approval. • Should rock hammers be required for the excavation of the high strength bedrock, further advice should be sought from EI regarding vibration

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			mitigation and monitoring. Appendix C provided general guideline levels of vibration velocity for evaluating the effects of vibration in structures. • Groundwater seepage monitoring should be carried out during bulk excavation works and prior to finalising the design of a pump out facility. Outlets into the stormwater system will require Council approval. • Furthermore, any existing buried services, which run below the site, will require diversion prior to the commencement of excavation or alternatively be temporarily supported during excavation, subject to permission or other instructions from the relevant service authorities. • Enquiries should also be made for further information and details, such as invert levels, on the buried services.
Contamination			
C-1	General	Construction	Minimise disturbance of soils below the marker layer. Where excavation is unavoidable, the controls listed herein and within the LTEMP should be implemented.
C-2	Documentation / Permits	Construction	Safe Work NSW (2022b) requirements include: • All site workers shall be inducted to the site and made aware of the procedures outlined in this LTEMP. • SafeWork NSW permit for friable or non-friable asbestos removal works. • Asbestos Removal Control Plan prepared by a Licensed Asbestos Removalist.
C-3	Occupational Exposure	Construction	Work involving any breaches of the marker layer, will require supervision by a Class A licensed asbestos contractor. The works will be undertaken using the procedures described in Safe Work NSW (2022b) and the following site-specific procedures: • An asbestos work area shall be defined and clearly marked. • All personnel working within the asbestos work area shall wear P2 (or higher) class half face respirators, disposable gloves and coveralls made from materials which provide adequate protection against fibre penetration whilst completing works and whilst within the asbestos work area. • An exclusion zone shall be established around the perimeter of the asbestos work area. • Asbestos warning signs shall be placed surrounding the asbestos work area and at entry/egress points.

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			• A decontamination area shall be marked out within the asbestos work area for the removal and disposal of personal protective equipment (PPE) before site workers leave the asbestos work area. • Personal decontamination must be undertaken each time a site worker leaves the asbestos work area and at the completion of the works. All disposable PPE shall be disposed of as asbestos waste. • Static air monitoring by a Licensed Asbestos Assessor at a minimum of four locations surrounding each asbestos work area and with consideration to neighbouring receptors shall be undertaken in accordance with the National Occupational Health and Safety Commission (2005) Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres 2nd Edition for the duration of the work.
C-4	Excavation and Stockpiling of Soils	Construction	Any material excavated from below the marker layer to be segregated from the backfill material above the marker layer. Material from below the marker layer to be treated as contaminated with asbestos. If material from below marker layer is mixed with stockpiled material from above the marker layer, it shall all be treated as asbestos contaminated. Material above the marker layer was classified as VENM prior to its use as backfill at the site and is not known to contain ACM. If suspected asbestos is identified in material above the marker layer, however, then the material shall be managed in accordance with the Unexpected Finds procedure in Section 0. Stockpiles of excavated materials shall be surrounded by sediment controls to prevent sediment egress from the site and shall be covered with plastic sheeting once the stockpile is fully formed and overnight.
C-5	On-site reuse of excavated materials	Construction	If there is no breach of marker layer and no unexpected finds during excavation, material from above the marker layer can be reinstated above the marker layer. Reuse of material confirmed to contain ACM is only permitted beneath the marker layer on the condition that the marker layer will be reinstated. If the soil excavated from beneath the marker layer is surplus to requirements, it may not be reused for any other purpose or at any other location at the site and must be stockpiled and classified for off-site disposal to a suitably licensed waste facility as described further below. If natural soil underlying the asbestos-impacted fill is encountered (i.e. Botany Sands), this may be stockpiled separately and assessed for suitability of reuse on-site.
C-6	Reinstatement of marker layer and capping	Construction	Following completion of intrusive works, the marker layer should be re-instated. If replacement of the marker layer (either in its entirety or in sections)

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			is required, this should be replaced with a like-for-like equivalent in a high contrast colour (e.g. orange). Soil used to reinstate the site atop the marker layer should be: • Soil which was won from above the marker layer and which had been adequately managed such that it was not cross-contaminated with asbestos-containing fill. • Soil which has been classified as VENM prior to import for use at the site as backfill.
C-7	Waste Management	Construction	All soil excavated from the site which is not being reinstated in the excavation from which it originated must be assessed in accordance with the NSW EPA (2014) Waste Classification Guidelines and disposed of off-site to a suitably licensed waste facility in accordance with: • <i>Protection of the Environment Operations Act 1997.</i> • <i>Protection of the Environment (Waste) Regulation 2014.</i>
C-8	Asbestos	Construction	If suspected asbestos is identified in the area fronting Danks Street, material above the marker layer, or the nature of the asbestos contamination below the marker layer is observed to be different to what is described above, this shall be managed as an Unexpected Find.
C-9	Classifications	Construction	Records of sampling, waste classification, waste disposal documentation, and observations of ACM should be retained as described in: • <i>Protection of the Environment Operations Act 1997.</i> • <i>Protection of the Environment (Waste) Regulation 2014.</i>
Acid Sulfate Soils and Soil Salinity			
ASS-1 SS-1	Saline and/or acid sulfate soil suspected	Construction	• Stop excavation and confine material to a bunded (treatment) area. • Have material assessed by environmental consultant for presence. • Follow procedures described in a site-specific management plan. • Procedures should include addition of gypsum and/or lime, allowing a safety factor of 1.5 in the calculation of the amount of additive required (to ensure sufficient treatment).
ASS-2 SS-2	Treatment of saline / ASS not effective	Construction	• Re-assess gypsum and/or liming rates. • Continue or ameliorate addition, as required. • Re-sample and analyse to confirm successful treatment.

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ASS-3 SS-3	Neutralisation of ASS indicates too much lime added (soil is highly alkaline)	Construction	- Remediate soils before use, by mixing the material with non-treated, acidic soil (i.e. use excess lime to neutralise more ASS). - Re-sample and analyse to confirm successful treatment (neutralisation).
ASS-4 SS-4	Bunded soil treatment area is damaged	Construction	- Repair bund as soon as practicable. - Clean-up any dispersed soil and place back into the treatment area. - Check surrounding area for impact from leachate and take remedial action.
ASS-5 SS-5	Groundwater level falls below the upper (predicted / allowable) limit	Construction	- Pause / adjust the rate of dewatering to restore groundwater level to / above the allowable soil horizon limit. - Review soil exposure by checking field pH and EC within affected area. - Determine potential causes by reviewing construction practices, weather, baseline groundwater monitoring data. - Perform additional groundwater monitoring as necessary. - Review and confirm mitigation measures to be implemented, including: - Maintaining soil moisture levels by targeted groundwater recharge; - Adjusting the construction activities or schedule; and - Treatment of additional soil in treatment area. - The pH and EC of water should be monitored.
ASS-6 SS-6	Extended rainfall generating excessive water	Construction	- Test accumulated (ponded) water for pH and EC. - Review disposal options. - Release to local stormwater network, if dewatering licence permits, or inject into subsurface. - Backfill pits as soon as practical, to reduce capacity for site ponding.
ASS-7 SS-7	Extended delays due to equipment failure, leaving excavated materials open to oxidation	Construction	- Confirm addition of gypsum / lime sufficient to neutralise the total potential salinity and/or acidity of the excavated soil. - Cover stockpiles and/or the walls and bases of exposed soil surfaces with sheets of builder's plastic, to reduce rates of soil leaching and oxidation. - Review engineering (shoring / piling) designs.
ASS-8 SS-8	Spillage of saline / acid	Construction	Spilt soil to be collected and transferred to the bunded treatment area as soon as practicable.
Arborist			
A-1	Tree Retention	Construction Design	Appoint a project arborist for the works period who is an AQF Level 5 consulting arborist.

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		Operation	- Retain the existing Tree Protection Zone Fencing in situ, with a slight decrease in the extent of fencing around T66 and T65 back to the Tree Protection Zone (TPZ). The dimensions are shown on the Arborist Plans in ELKE's report. Additional TPZ fencing and mulch is required in the area shown on the arborist plans near T81. - The project arborist must sign off the installed TPZ fencing, signage, mulch, and ground protection, prior to commencement of any works on site (including site preparation and including site setup). - This is typically and should be part of obtaining the construction certificate (CC). At this time, an induction regarding tree protection with the project arborist and the site foreman is to occur and be signed off by the project arborist to obtain a CC. - Retain all the tree protection measures for the duration of all the works (including landscaper aping).
Construction Waste Management Plan			
CWMP-1	Waste Avoidance & Reduction	Construction	Prioritise construction methods that minimise offcuts and surplus (e.g., modular/prefabricated components, accurate ordering, and staged deliveries).
CWMP-2	Safe Disposal Methods	Construction	Ensure proper management and disposal of all waste streams.
CWMP-3	Hazardous & Special Waste Management	Construction	Engage licensed contractors for handling asbestos, contaminated soil, paint, solvents, light bulbs, e-waste, and batteries; store in secure and bunded areas before removal.
CWMP-4	Green Waste & Landscaping Residues	Construction	Mulch or compost organic waste generated during landscaping works for reuse on-site where practical.
CWMP-5	Reuse Opportunities	Construction	Identify salvageable materials (e.g., timber formwork, concrete rubble, steel offcuts) for reuse on-site or resale to approved facilities.
CWMP-6	Collection, Transport & Disposal	Construction	Ensure all waste streams are collected by licensed contractors and transported to EPA-licensed facilities; keep dockets/receipts for auditing.
CWMP-7	Site Staff Training & Induction	Construction	Conduct ongoing inductions and toolbox talks on waste sorting, contamination avoidance, manual handling, and spill response procedures.
CWMP-8	Monitoring & Reporting	Construction	Maintain daily site inspections, weekly reporting to the Site Manager, and quarterly audits comparing estimated vs. actual waste volumes.

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CWMP-9	Recordkeeping & Data Collection	Construction	Track tonnages of waste reused, recycled, or sent to landfill; report performance against NSW and City of Sydney waste diversion targets (80%+).
CWMP-10	Policy & Regulation Compliance	Construction	Review and update the WMP regularly to reflect site progression, regulatory changes, and lessons learned during earlier works.
Wind			
W-1	Outdoor trafficable areas	Design Construction	- Retention of the proposed densely foliated evergreen trees along the connecting corridor between Danks Street and New Street, along New Street itself, and at the corner of Danks Street and Young Street. These trees should have a minimum height of 3m and a minimum canopy width of 3m. - Retention of the proposed 2.4m high impermeable screen at the outdoor seating area located at the eastern end of the New street. - Inclusion of densely foliating evergreen trees with a height of 3-4m and a canopy width of 3m at the communal park located south of New street. - Inclusion of awnings with a minimum depth of 2.5m along the connecting corridor between Danks Street and New Street, at the corner of Danks Street and Young Street, and at the communal area located in the north-western part of the site. - Inclusion of 1m high planter boxes with 0.5-1m high densely foliated vegetation at the communal area located in the north-western part of the site. - The use of loose glass-tops and light-weight sheets or covers (including loose BBQ lids) is not appropriate on high-rise outdoor terraces and balconies. Furthermore, lightweight furniture is not recommended unless it is securely attached to the balcony or terrace floor slab.
Water Management			
WM-1	Sediment from the construction site washing into the existing stormwater drainage inlet infrastructure.	Design Operation Construction	- Sediment traps protection will be installed surrounding all existing stormwater drainage infrastructure inlets to prevent sediment entering the system. - Temporary Stormwater Systems are to be installed where required to capture all site runoff within the zone of excavation. Runoff will be allowed to settle out suspended particles and debris, and an acceptable water of 50mg per litre of Non-Filterable Residues (NFR) is required to be achieved prior to discharge. - Installation of a fence around the perimeter of the basin is required as well as a rip rap to allow for bobcat access for periodic removal of sediment. Also,

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			a perforated riser outlet pipe needs to be placed for the connection and discharge to an existing pit.
WM-2	Sediment from the construction site leaving the site and ashing into the existing stormwater drainage inlet infrastructure or downstream properties	Design Operation Construction	- Sediment basins will be installed, and overland flow directed towards them. The basins will attenuate stormwater flows allowing for the settlement of sediment preventing discharge into the downstream infrastructure. - The proposed basement excavation will serve as a temporary sediment basin, leveraging the significant depth of the excavation to detain stormwater runoff and promote the settlement of suspended sediments prior to controlled discharge. Due to the scale of the excavated area, dewatering may be undertaken at multiple discharge locations along Young Street and Danks Street, subject to the requirements of a dedicated Dewatering Management Plan prepared by an external consultant. - In addition to the basement excavation areas, three supplementary sediment basins are proposed across the site to manage runoff from unexcavated ground surfaces and public domain works. These basins have been positioned in locations aligned with the site's natural topography to optimise the collection and treatment of sediment-laden stormwater. Each basin will be dewatered in accordance with the aforementioned Dewatering Management Plan to ensure compliance with environmental and regulatory requirements.
WM-3	Mud Tracking	Design Operation Construction	A shaker grid and/or truck wash down zone to be implemented to the construction site. All vehicles leaving the site will have their wheels washed down and pass over the shaker grid to remove any spoil.
WM-4	Rainfall runoff falling on the site collecting sediment from the construction site and conveying it overland onto downstream properties and waterbodies.	Design Operation Construction	Installation of sediment fences on all downstream boundaries of the site to collect sediment and prevent it discharging onto downstream properties or waterbodies.
WM-5	Sediment from the construction site washing into the existing stormwater drainage inlet infrastructure.	Design Operation Construction	One sediment basin will be installed, and all overland flow directed towards them. The basins will attenuate stormwater flows allowing for the settlement of sediment preventing discharge into the downstream infrastructure.
BCA			
BCA-1	Housekeeping	Operation	- Ensure exits and paths of travel to exits remain unobstructed (in particular stairways) - Avoid storage of materials in unoccupied areas

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			• Limit storage of flammable/combustible materials to designated and approved areas • Prevent chocking open fire/smoke doors • Prevent storage of materials that could hinder access to firefighting equipment