

Appendix C – Mitigation Measures

SSD-78287462 – 79-81 Queens Road and 2-8 Spencer Street, Five Dock

Consultant	Mitigation Measure
Design and Operation	
Wind Impacts	
CPP Wind Engineering Consultants	<ul style="list-style-type: none"> The northern corner balconies on the 5-storey building are open to two sides and may attract some cross flow. To provide for milder wind conditions on the balconies, partial or full enclosure on the short side. Further investigation to the northern building breezeways during detailed design at a later stage should be undertaken. To minimise cross flow on the recreational terrace area on Level 05, a partial enclosure is recommended, ideally on the western frontage of the northern pool area. Areas intended for outdoor seating (i.e. along William Street) would benefit from permanent or temporary wind breaks or landscaping to provide wind protection.
Noise and Vibration	
Resonate	<p>Recommended Glazing Requirements</p> <ul style="list-style-type: none"> Recommended glazing performance specifications have been provided to ensure compliance with internal acoustic amenity requirements. It is recommended that a detailed assessment is carried out during the design stage to optimise glazing sound insulation performances. These glazing requirements are only recommended to the facades with line of sight of Queens Road, i.e. North and East facades. This is because only Queens Road is deemed to be a busy road in accordance with the <i>Department of Planning's Development Near Rail Corridor and Busy Roads – Interim Guideline</i>. <p>Natural Ventilation</p> <ul style="list-style-type: none"> Road traffic noise may impact on internal amenity and therefore, it is recommended that an alternate means of ventilation (not open windows) is required to for all Sole Occupancy Units. The following displays alternative means of ventilation: <ul style="list-style-type: none"> Air conditioning with an outside/fresh air component (not a conventional 'split' system). Mechanical ventilation drawn from a 'quiet' side of the building and/or with an acoustically attenuated intake path. An open window on a 'quiet' side of the building (should single sided ventilation be possible).

Consultant	Mitigation Measure
	<p>Mechanical Services Noise Emission</p> <ul style="list-style-type: none"> • Recommended in-principle methods of controlling mechanical services noise emission, to be considered during the design stage are: <ul style="list-style-type: none"> - Selecting the quietest plant for a given task; - Judicious location and orientation; - Use larger fans at a slower speed rather than smaller fans at a higher speed; - Using variable speed drives to lower fan speed in response to lower duty/load requirements; - Use of barriers, both incidental and purpose designed; and - Internally lined ducts and bends, external duct and equipment wrapping, silencers.
Traffic and Parking	
<p>The Transport Planning Partnership</p>	<p>Green Travel Plan (GTP)</p> <ul style="list-style-type: none"> • Implementing a GTP will be a key component of the proposed development in targeting a 5-star rating from the Green Star rating criteria for Movement and Place. • The following measures should be implemented to encourage a higher uptake of sustainable travel: <ul style="list-style-type: none"> - Public Transport: Provide service timetable and public transport map for nearby bus services on noticeboards located in common areas where they will be visible to all residents. - Walking and Cycling: A walking map showing essential amenities near the site can be provided on noticeboards, newsletters, websites and social media to inform residents that they do not need to travel far to access nearby supermarkets, restaurants, medical centres, sports facilities, etc. Additionally, a walking and cycling group, where all residents would be invited to walk and/or cycle together around the neighbourhood. This initiative would help promote and encourage social inclusion, as well as promote walking and cycling as the choice of travel. - On-site measures: Access to high-quality internet services to give residents an option to work on-site, Gym facilities as an alternative from travelling off-site. - Off-site measures: Improved signage and wayfinding from key public transport hubs, to improve the walking and cycling experience. Signage would include wayfinding for cyclists to direct them to the best and safest route to the site and other key destinations. - Transport Access Guide (TAG): Provision of a TAG to all residents to inform them of their transport options. A TAG is a concise presentation outlining how to reach a site via sustainable modes of transport.
Construction Management	
Noise and Vibration	
<p>Resonate</p>	<p>Stakeholder Consultation</p> <ul style="list-style-type: none"> • A noise and vibration complaints handling procedure and register must be developed and implemented during construction.

Consultant	Mitigation Measure
	<p>Construction noise and vibration management plan</p> <p>Prior to the commencement of major construction works, the contractor must develop a Construction Noise and Vibration Management Plan (CNVMP). The CNVMP shall:</p> <ul style="list-style-type: none"> • Identify relevant construction noise and vibration criteria as detailed in this report • Identify neighbouring sensitive land uses for noise and vibration • Summarise key noise and vibration generating construction activities and the associated predicted levels at neighbouring land uses. • Identify reasonable and feasible work practices to be implemented during the works • Summarise stakeholder consultation and complaints handling procedures for noise and vibration. <hr/> <p>Work Programming</p> <ul style="list-style-type: none"> • Particularly noisy works shall occur during Standard Working Hours wherever feasible. These hours are as follows: <ul style="list-style-type: none"> - Monday to Friday: 7:00am to 6:00pm; - Saturday: 8:00am to 1:00pm; - Sunday: No work; - Public Holidays: No work. • Opportunities for respite periods after works that may exceed the highly noise-affected management level of 75dB. <hr/> <p>Truck Movements and Site Access</p> <ul style="list-style-type: none"> • Site access and delivery points shall be located as far away from residences as possible. • Truck movements shall use arterial roads and diverted away from residential streets where feasible. • Deliveries shall not occur during the night-time period where possible. <hr/> <p>Site Management</p> <p>Site management procedures must include the following:</p> <ul style="list-style-type: none"> • regularly train workers and contractors (such as at toolbox talks) to use equipment in ways to minimise noise • site managers to periodically check the site and nearby residences for noise problems so that solutions can be quickly applied • processes that generate lower noise levels must be selected where feasible • noisy plant must be located as far away from residences as is practical to allow efficient and safe completion of the task • the potential shielding provided by site topography and intervening buildings must be taken into account in locating equipment • site compounds must be located as far away as possible from residences • equipment that is used intermittently must be shut down or throttled down to a minimum during periods where it is not in use • works must be planned to minimise the reduce the noise from reversing signals • warning horns must not be used as signalling devices

Consultant	Mitigation Measure
	<ul style="list-style-type: none"> • two way radios must be set to the minimum effective volume • noise associated with packing up plant and equipment at the end of works must be minimised • avoid the use of radios or stereos outdoors • avoid the overuse of public address systems • avoid shouting, and minimise talking loudly and slamming vehicle doors • turn off all plant and equipment when not in use <hr/> <p>Equipment management Equipment management must include the following:</p> <ul style="list-style-type: none"> • selection of low-noise plant and equipment where possible • equipment must be well maintained • equipment must have quality mufflers and silencers installed where relevant • equipment not in use on site must be shut down • tasks must be completed using the minimum feasible power and equipment.
Aboriginal Cultural Heritage	
Artefact	<p>Unexpected Finds Procedure (UFP)</p> <ul style="list-style-type: none"> • An Unexpected Finds Procedure (UFP) must be prepared prior to the commencement of works. • Ongoing consultation with RAPs should occur and support the UFP. <hr/> <p>Heritage Inductions</p> <ul style="list-style-type: none"> • An Aboriginal heritage induction must be prepared and provided to personnel working on the project, to ensure workers understand their obligations under the <i>National Parks and Wildlife Act 1974</i>. • The heritage induction must include a summary of the Aboriginal background of the site, legislation and the UFP.
Waste	
Salt ³	<ul style="list-style-type: none"> • Implement the management procedures from the Construction and Waste Management Plan provided at Appendix JJ to ensure construction waste is handled and disposed of safely and correctly.

Consultant	Mitigation Measure
Hydrogeological Impacts	
Douglas Partners	<p>Geotechnical Issues</p> <ul style="list-style-type: none"> Site preparation and excavation works must be carried out with consideration of the recommended methodology provided in Section 9 of the Geotechnical Investigation at Appendix Z. <hr/> <p>Groundwater</p> <ul style="list-style-type: none"> Groundwater requiring disposal may need to be treated to reduce the heavy metal (and suspended solids) and PFAS concentrations prior to disposal to stormwater depending on the levels of contaminants in the collected water. Engagement with Council will be required to confirm their stormwater disposal requirements. Ongoing monitoring of groundwater quality will be required to check that the groundwater quality complies with the nominated criteria for disposal. Monitoring and associated reported as identified in Section 12 of the Dewatering Management Plan is suggested during initial construction and should be undertaken during excavation and construction works on site. A Water Supply Works Approval will need to be required from WaterNSW and if measured inflows are greater than 3ML/year, then a Water Access License would need to be required. <hr/> <p>Contamination and Remediation</p> <ul style="list-style-type: none"> Further in situ or ex situ investigation included visual and analytical processes are required to confirm the preliminary waste classifications, prior to offsite disposal. Should excavated soils require offsite disposal during development, further testing and a waste classification assessment, which takes into consideration the information provided in the Detailed Site Investigation into account. Undertake a hazardous building material survey of the current buildings within the site to assess the presence of any hazardous building materials prior to demolition. Further investigation of groundwater particularly to assess the presence of both dissolved and total metals across the site prior to and during dewatering in accordance with the Dewatering Management Plan at Appendix AA. Carry our remediation in accordance with the Remediation Action Plan (RAP) prepared for the site in accordance with the NSW EPA at Appendix EE If Acid Sulfate Soils (ASS) are encountered, implement the ASS management procedures provided in the Acid Sulfate Soils Management Plan at Appendix CC. An environmental management plan (EMP) is to be prepared and administered consistent with NSW EPA requirements if remediation involving the management of contamination on-site occurs.

Consultant	Mitigation Measure
Traffic and Parking	
The Transport Planning Partnership	<p>Construction Traffic Management Plan (CTMP_</p> <ul style="list-style-type: none"> • Prepare a detailed CTMP prior to the issue of a Construction Certificate once a contractor is engaged. <p>Parking Arrangements</p> <ul style="list-style-type: none"> • No on-site construction parking will be provided; therefore construction workers should be encouraged to use public transport and carpooling where possible. • The following measures would be implemented to encourage staff to utilise public transport: <ul style="list-style-type: none"> - Provision of a secure tool storage facility on-site to allow tradespeople to safely store tools required for the project allowing them to use public transport to travel to and from the site daily. - During the site induction phase and regular management meetings, staff would be instructed to use public transport when travelling to the site and public transport timetables. <p>Construction Vehicles</p> <ul style="list-style-type: none"> • Construction vehicles should follow the dedicated construction vehicle routes that have been developed to provide the shortest distances to/from the arterial road network, whilst minimising the impact of construction traffic on local streets near the site. All truck drivers will be advised of the designated routes to/from the site.