Mitigation Measures Table

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Nicholson Street Build-to-Rent

Environmental Impact	Mitigation Measure	Residual Impact
Contamination	• Implementation of a Remedial Action Plan. • Site Validation Report to be prepared on completion of remediation activities and submitted to the consent authority to demonstrate that the site is suitable for the proposed development following completion of remediation/validation.	**Low**
Noise and Vibration	**Construction Noise and Vibration Management** Prior to the commencement of site construction activities, the proponent / main contractor should: • Assess the noise and vibration impacts based on the proposed construction methodologies; • Adopt a project specific construction noise and vibration management plan. The following mitigation measures will be implemented: • Truck zones will be located within a small alley way which connects Christie Street and Nicholson Street; management of construction traffic control will aid in reducing the acoustic impact to local receivers; • Notification (leaflet or similar) of all receivers identified in Section 3.1 of the Noise and Vibration Impact Assessment is to be provided prior to commencement of works. • Introduce respite periods where construction activities exceed the 'highly noise affected level (75 dB(A)Leq(15min)) based on the predicted noise levels. - Recommended respite hours: Monday to Friday between 7am-8am and 12pm-1pm. • Vibration and noise monitoring based on expert advice and assessment by a Geotechnical Engineer. - Vibration monitoring is recommended for commercial receiver C2 throughout phases of demolition and excavation. • Adopt quieter methods as much as practical to reduce vibration and noise levels. • Adopt complaints handling procedure outlined in Section 13 of the Noise and Vibration Impact Assessment.	**Low**

	• Site induction to be undertaken with all contractors. **Operational Noise** • A detailed noise emissions assessment of all ventilation or other plant items to be undertaken at construction certificate stage once equipment items are selected and locations are finalised. The assessment should indicate any treatment required to comply with the trigger levels. • Plant and equipment are to be maintained so that it does not emit excessive noise. • Construction and maintenance (including the collection of waste) is to occur between the following hours (unless specific approval is obtained otherwise): - General construction and site maintenance–7am to 6pm Monday to Friday and 8am to1pm Saturdays. - Waste collection-7am to 6pm Monday to Friday • Complying mitigation controls are provided within Section 6 of the Noise and Vibration Impact Assessment to minimise noise from noise intrusion. • Plant and equipment are to be maintained so that it does not emit excessive noise.	
Basement Construction and groundwater conditions	**Dilapidation Surveys** Prior to commencement of any site works, detailed internal and external dilapidation reports be completed on all neighbouring buildings, or parts thereof, located within the zone of influence of the basement excavation (within a distance equivalent to twice the excavation depth when measured from the basement walls). **Vibration Monitoring** Full-time quantitative vibration monitoring will be carried out on the neighbouring buildings to the south-east and also along the road boundaries from the commencement of demolition to the end of rock excavation to check that vibrations are below acceptable limits. **Basement Retention** Prior to commencement of excavation, the proposed vertical cuts in the soil and rock profiles are to be supported by cast-in situ retention systems. **Temporary Rock Anchors** Prior to installation of temporary rock anchors, permission must be sought from the neighbouring property owners (including Council). **Further Geotechnical Input**	**Low-Moderate**

	The following is a summary of the further geotechnical input which is required: • Review and update of this report on completion of the 3-month groundwater level monitoring and seepage analysis, as required by WaterNSW • Assessment on how the existing basement can be safely demolished without undermining or removing support from the site boundaries; • Additional geotechnical investigation post-demolition; • Additional advice once the method of resisting the uplift pressures of lift core has been finalised; • Preparation of a Dewatering Management Plan (DMP); • FEM analysis of the basement retention system and excavation; • Preparation of Geotechnical Monitoring and Contingency Action Plan(GMCAP); • Dilapidation survey reports on all neighbouring structures, or parts thereof, located within the zone of influence of the basement excavation; • Review of the dilapidation survey reports; • Quantitative vibration monitoring on the neighbouring buildings to the south-east and along the road boundaries; • Inspection of perimeter pile wall drilling; • Proof testing and lift-off testing of temporary rock anchors for the basement walls; • Progressive rock face inspections (below toes of the piled walls) as the excavation proceeds; • Groundwater monitoring of seepage volumes; • Internal footing inspections, including spoon testing; • Pile inspections for columns located outside the basement footprint	
Construction Traffic	Prior to the commencement of construction, a detailed Construction Pedestrian Traffic Management Plan will be prepared. The following mitigation measures will be implemented during construction: • Trucks to minimise the use local streets for access to the construction site; • Trucks to enter and exit the site in a forward direction; • Pedestrians near the ingress/egress points will not be held unnecessarily.	**Low**

	• At construction vehicle access/egress points, priority is to be given to trucks accessing the site over trucks egressing the site so as to have no impact to traffic flow on surrounding roads (unless exceptional circumstances do not permit) • Trucks to not circulate on the road network to wait to enter the site (unless exceptional circumstances do not permit) • Restrict construction vehicle activity to designated routes which do not utilise any local roads; • Truck drivers will be advised of the designated truck routes to/ from the site; • Construction access from the external road network to mainly occur at signalised intersection; • Pedestrian movements adjacent the construction site will be managed and controlled by site personnel where required; • Pedestrian warning signs and construction safety signs/devices to be utilised in the vicinity of the site and to be provided in accordance with WorkCover requirements; • Construction activity to be carried out in accordance with approved hours of work; • Truck loads would be covered during transportation off-site; • Activities related to the construction works would not impede traffic flow along adjacent roads; • Construction vehicles not to queue on adjacent streets	
Operational Traffic	Develop a Green Travel Plan and implement the potential measures listed in Section 3.9 of the Transport and Accessibility Impact Assessment. The Green Travel Plan is to be reviewed on a yearly basis by undertaking travel surveys. The mode shares are to be first reviewed at least 18 months after occupation, to allow activity levels to settle at the site.	**High Positive**
Water Management	**Regular Maintenance** On-going maintenance of the stormwater infrastructure system described in Integrated Water Management Report needs to be undertaken on a regular basis to ensure that the system operates efficiently and as required by the design. The stormwater infrastructure requiring maintenance is as follows: • Ocean Protect Stormfilter • Pit and pipe network	**Low**

Flooding	• Implement the evacuation strategy and shelter in place policy in the event of a flood emergency. Noting: - To help minimise the flood risk to future occupants, the first response that should be adopted in a flood emergency event for the site is shelter in place as the flood warning time and flood duration are both less than six hours for the site. - Flooding along Nicholson Street and Christie Street also limits the horizontal evacuation potential for the area. The lack of pre-determined evacuation locations and the rapid onset of flooding in the catchment led to sheltering being the most suitable means of emergency management.	**Low-Moderate**
Waste Management	**Construction Waste** • Retain a copy of the Waste Management Plan on-site during the construction phases of the development, along with other waste management documentation (e.g. contracts with waste service providers). • Maintain a logbook hat records waste management and collection with entries including: - Time and date of collections; - Description of waste and quantity; - Waste/processing facility that will receive the waste; and - Vehicle registration and company name. • Waste management documentation, the logbook and associated dockets and receipts must be made available for inspection by an authorised Council Officer at any time during site works. **Operational Waste** The site manager will be responsible for the management of waste at the site. Should there be any issues that impact on the operational efficiency, safety and suitability of waste management, management will be responsible for making any necessary changes, responsibilities include: • Using this WMP to inform waste management operations, design and infrastructure; • Providing educational materials and information on sorting methods for recycled waste, awareness of waste management procedures for waste minimisation and resource recovery; • Maintaining a valid and current contract with a licensed waste service provider for waste and recycling collection and disposal; • Making information available to residents and visitors about waste management procedures;	**Low**

	• Organising, maintaining and cleaning bins as part of a regular maintenance schedule; • Manoeuvring bins to specified onsite collection point prior to and following scheduled collection of waste bins. • Organising bulky waste collections as required; • Ensuring bin allocation and waste/recycling collection frequency is adequate. Requesting additional infrastructure or services where necessary; and Monitoring any vermin and pest issues and arranging appropriate controls (traps or fumigating) and maintenance of doors or other points of potential entry.	
Aboriginal Cultural Heritage *European Heritage*	Standard precautionary measures should apply, with an Unexpected Finds Protocol (including specific procedures for Aboriginal objects and skeletal remains) to be implemented in the unlikely event that Aboriginal material is encountered during works.	**Low**
Social Impact	• Ensure that the construction program for the site is staged to lessen impacts. • Communication in the leadup to and during construction should be targeted at families with younger children and older people and suitable mitigation measures implemented. • Mitigation measures identified in the Demolition Noise and Vibration Management Plan must be implemented according to conditions of consent. • Maximise site safety by appropriately managing the pedestrian and construction activity interface. • Construction traffic management plan. • Identify other development sites in the area and coordinate construction activities as required. • Conduct ongoing reviews of cumulative heavy vehicle traffic generation and coordination of heavy vehicle routes used by these projects will be undertaken on a regular basis between the appointed contractor, Council and TfNSW to minimise impacts on the road network.	**Low**