

Mitigation Measures Table

Leichhardt Oval Refurbishment SSD-85149458

Potential Impact	Particulars	Mitigation Measures	Residual Impact
Arboricultural impacts and canopy loss	Arboricultural, environmental, amenity impacts of proposed removal of 13 trees.	- Mitigation measures are provided in the AIAR prepared by Earthscape Horticultural Services, summarised as follows. - Replacement tree planting is proposed along the Greenway, Darley Road Park and Hawthorne Canal Reserve. A total of 33 x 200L trees are proposed to be planted, resulting in a net positive canopy cover over 10 years within the broader area. - Potential impacts of the removal of 13 trees to facilitate the Northern Grandstand can be mitigated through the following measures: - Use of a project Arborist during construction - Care taken near trees during construction to limit tree damage - Tree removal to be undertaken by an experienced tree surgeon - Ground protection on construction routes to be used - Care taken with demolition and excavation works within tree protection zones - Consideration of alternative construction methods to improve tree protection - Care taken with the installation of underground services - Care taken with the pruning of roots and canopy - Care taken with the use of temporary scaffolding	Low
Traffic	- Impacts on parking, traffic generation - Short term impacts from construction	- The proposed development is supported by a TIA, Green Travel Plan and Construction Traffic & Pedestrian Management Plan prepared by Traffix. The supporting appendices provide suitable mitigation measures as summarised to reduce potential impacts. - No change to the existing capacity of the ground is proposed. - The proposed development gives rise to the opportunity to increase public and active transport as the preferred event day mode of transport. - Short term traffic impacts as a result of construction activities can be suitable managed and monitored and is not anticipated to cause any unreasonable impact on the surrounding road network.	Low

Potential Impact	Particulars	Mitigation Measures	Residual Impact
Heritage	- Impacts on heritage items within Leichhardt Oval - Impacts on heritage items in broader area	The SoHI prepared by Artefact provides the following mitigation measures. Built Environment - Potential indirect heritage impacts during construction works could occur due to vibrations on the built structures within the study area. The following mitigation measures should be undertaken to minimise these potential impacts. - Where vibration intensive plant or tools are used, vibration monitoring should be implemented to ensure that construction-related vibrations do not exceed the identified vibration damage screening levels. Assessment and monitoring of vibration impacts within the safe working limits near heritage fabric should adhere to British Standard BS 7385: Part 2: Evaluation and Measurement for Vibrations in Buildings – Part 2 Guide to Damage Levels from Ground-Borne Vibration and German Standard DIN 4150, Part 3: Structural Vibration in Buildings: Effects on Structure. Archaeology - It is recommended that the following mitigation measures are implemented prior to and during the proposal which requires limited ground penetration including excavation works: - Unexpected Finds Procedure - Heritage Induction for site staff	Low
Aboriginal Heritage	- Unexpected finds of Aboriginal objects - Impacts on any potential items or places of Aboriginal significance	The ACHAR prepared by Artefact identified no potential for Aboriginal objects to be retained within the study area, nor any areas of archaeological potential which are at risk of harm by the proposal. Nonetheless, mitigation measures are proposed to minimise any potential impacts, as follows: - Ongoing consultation with the RAPs should continue throughout the life of the project - A heritage induction including an unexpected finds procedure (UFP) should be prepared and all workers should be inducted prior to the commencement of works - No further archaeological investigation is recommended.	Low
View Impact	Impacts on public views from the surrounding area.	The VIA prepared by Moir Studio provides the following mitigation measures: - Retention and protection of significant trees, particularly the group of four heritage significant Moreton Bay fig trees at the Mary Street entrance, along with the Hills Fig and Cedar Wattle trees around the northern boundary that hold strong community landscape value, where possible - Material and colour selection that is recessive, durable, and sympathetic to both the parkland setting and local built form - Careful placement and bulk reduction of new structures to maintain key sightlines into and through the oval, as well as outward views to the broader parklands - Open and lightweight design treatments for elements such as fencing and balustrades, supporting visual permeability and reducing built presence	Low

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Geotechnical	- Excavation support and stability - Poor foundations for footings, excessive settlement of footings - Poor subgrade for slabs and pavements on-grade - Impact on adjacent structures - Acid sulfate soils and salinity - Erosion protection - Groundwater - Disposal of contaminated material	The Geotechnical reports propose the following mitigation measures to mitigate potential impacts: - Design parameters for batters slopes, shoring and/or retaining walls based on site-specific investigation / laboratory testing of ground conditions. - Undertake geotechnical inspections of batter slopes - Design parameters for footing design based on site-specific investigation / laboratory testing of ground conditions. - Geotechnical inspection of foundations. - Design parameters for subgrade and pavements based on site-specific investigation / laboratory testing of ground conditions. - Subgrade preparation, earthworks inspection and testing. Installation of drainage - Vibration trials and possibly on-going vibration monitoring. Dilapidation surveys, analysis of lateral movements of shoring / retaining walls, stormwater management. - Assessed as low risk. Use appropriate concrete grades; confirm steel suitability - All permanently exposed soil surfaces are to be protected. - Design for minor temporary construction period seepage; use sump and pump systems; tremie pipes for pile installation; monitor seasonal fluctuations - Follow EPA guidelines; refer to contamination report.	Low
Water Management	- Water connection - Sewer connection	The integrated water management plan provides the following mitigation measures: - A Water Service Coordinator is required to be engaged and coordinate the water services supply with Sydney Water to ensure it is approved and that the proposed activity does not negatively impact their system. - A Water Service Coordinator is required to be engaged and coordinate the sewer services supply with Sydney Water to ensure it is approved and that the proposed activity does not negatively impact their system. - Design of an erosion and sedimentation control plan to reduce the debris and pollution in surface stormwater runoff from the site during construction phase of development. - The point of stormwater connection will be maintained and has been modelled to determine the allowable flowrate currently accommodated. - Downstream catchment conditions are to be maintained. - Installation of Ocean Protect OceanGuard Pit inserts in all surface inlet pits or equivalent, and an oil baffle to meet Council water quality requirements.	Low
Social impacts	- Temporary facility closure - Contamination exposure risks	Develop a Communications Strategy to guide engagement and communication methods with the community, specifically neighbouring residents and businesses, users of the sports ground and visitors to the area, on when the sports ground will be closed and where alternative facilities can be accessed.	Low

Potential Impact	Particulars	Mitigation Measures	Residual Impact
	Impacts on health and wellbeing from construction, traffic, noise etc	- Contaminate management measures in accordance with the CEMP. - Construction impacts are short term and can be mitigated in accordance with the CTMP, CEMP and per Council's requirements.	
Services and Infrastructure	- Electrical connections - NBN connections	The integrated water management and infrastructure delivery plan provides the following mitigation measures: - Design phase is to make application to Ausgrid for upgrading the fuses in the existing substation. - Construction Contractor is to arrange works with Ausgrid well prior to project completion as an outage booking takes 12 weeks' notice. - Design phase is to make application to NBN for the relocation of existing equipment. - Construction Contractor is to arrange works with NBN well prior to project completion.	Low
Acoustic and Vibration (Operational-intrusion)	- Building services noise - PA system noise - Event Noise - Construction Noise and Vibration	The Acoustic and Vibration Report provides the following mitigation measures, - Acoustic assessment of the building services plant shall be conducted during the design phase of the project in order to confirm any noise control measure required. - A noise assessment of the PA system has been conducted to understand the level of noise impact to surrounding noise sensitive receivers. Noise impacts at the nearest noise sensitive receivers, are expected to be noticeable. However, these noise impacts are not expected to noticeably increase the noise impacts currently experienced. - Any future expansion of events is managed with an Event Noise Management Plan (ENMP). - A detailed Construction Noise & Vibration Management Plan shall be developed by the Contractor prior to demolition and/or construction begin to ensure that any site noise and, in particular, any complaints shall be monitored, investigated, managed and controlled.	Low
Wind	Wind impacts on spectators	The Pedestrian Wind Environment provides the following mitigation measures in relation to the Northern Grandstand. - Retain the current standard height porous perimeter handrail to ensure compliance with safety regulations. - Retain the circulation pathways (minimum 4 pathways) to access spectator seating on Ground and Level 1. It is expected that these holes in the grandstand's massing will alleviate the effect of the side streaming winds, by encouraging the prevailing winds to transverse through the structure as opposed to going around it. This design strategy is also expected to alleviate the wind conditions within the immediately adjacent lower Seating Bowl.	Low