

## APPENDIX 4

### Mitigations Table



| Mitigation Measures |  |
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| Issue               | Mitigation Measures  |
| Archaeological      | <p>The following mitigation measures will apply to the Detailed SSDA which will seek consent for physical works:</p> <ul style="list-style-type: none"> <li>Implement the following Unexpected Finds and Human Remains Procedure detailed within the Archaeological Assessment prepared by Urbis at Appendix 16 prior to the construction of the future Stage 2 detailed DA:</li> </ul> <p>If any archaeological deposits or features are unexpectedly discovered during any site works, the following steps must be carried out:</p> <ol style="list-style-type: none"> <li>All works within the vicinity of the find must immediately stop. The find must not be moved 'out of the way' without assessment. The find must be cordoned off and signage installed to avoid accidental impact.</li> <li>The site supervisor or another nominated site representative must contact either the project archaeologist (if relevant) or Heritage NSW (Enviroline 131 555) to contact a suitably qualified archaeologist.</li> <li>The nominated archaeologist must examine the find, provide a preliminary assessment of significance, record the item and decide on appropriate management measures. Such management may require further consultation with Heritage NSW, preparation of a research design and archaeological investigation/salvage methodology and notification of the discovery of a relic to Heritage NSW in accordance with S.146 of the Heritage Act 1977.</li> <li>Depending on the significance of the find, reassessment of the archaeological potential of the subject area may be required and further archaeological investigation undertaken.</li> <li>Reporting may need to be prepared regarding the find and approved management strategies.</li> <li>Works in the vicinity of the find would only recommence upon receipt of approval from Heritage NSW.</li> </ol> <p>Should clearly identifiable human remains be uncovered anywhere within the subject site, the following procedure should be implemented:</p> <ol style="list-style-type: none"> <li>All works within the vicinity of the find must immediately stop. The find must be cordoned off and signage installed to avoid accidental impact.</li> <li>The site supervisor or other nominated manager must notify the NSW Police and Heritage NSW (Enviroline 131 555).</li> <li>The find must be assessed by the NSW Police, which may include the assistance of a qualified forensic anthropologist.</li> <li>Management recommendations are to be formulated by the NSW Police, Heritage NSW and site representatives.</li> <li>Works are not to recommence until the find has been appropriately managed.</li> </ol> <p>In the event that bones are uncovered which may be human but cannot be confirmed by onsite staff, a suitably qualified archaeologist or heritage specialist should be contacted in the first instance to determine how to proceed.</p> |
| Biodiversity        | <p>The following mitigation measures will apply to the Detailed SSDA which will seek consent for physical works:</p> <ul style="list-style-type: none"> <li>Implement the following mitigation measures listed at Table 4 under Section 8 of the BDAR at Appendix 17: <ul style="list-style-type: none"> <li>Retain and restore native vegetation. The opportunities for retention of locally native trees are few, given their distribution across the development site. However, the opportunity for restoration and enrichment of native vegetation is afforded in the areas of deep soil to be the subject of the Landscape Plan. The planting palette will rely heavily on species characteristic of the CEEC STIF and PCT 3262. Importantly,</li> </ul> </li> </ul>  |

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|                 | <p>a diverse understorey can be restored with all structural layers planted. This will deliver a significant qualitative improvement in the composition of PCT 3262 pre-development.</p> <ul style="list-style-type: none"> <li>○ Retain, replace, and enhance fauna habitat. The replacement plantings and enrichment plantings will provide long term habitat and the boundary plantings will connect with offsite vegetation, thus enhancing local connectivity.</li> <li>○ Protect resident fauna. The Project Ecologist will supervise the removal of all trees and potential fauna habitat. A thorough pre-clearing / pre-demolition inspection shall be undertaken prior to clearing. Fauna will be removed from harm's way, relocated into suitable on-site habitat, or placed into veterinarian care if injured.</li> <li>○ Erosion/sedimentation. Standard sedimentation and erosion control measures will be installed and checked regularly.</li> <li>○ Exotic weed species. Due to its close horticultural management, few significant weeds occur on site. However, ongoing weed control must be implemented during all phases of the development. Any weeds removed are not to be stockpiled but instead disposed of at a suitable green waste facility. All loads are to be covered during transportation to minimise the risk of spread.</li> <li>○ Pathogens and disease. Although no pathogens were in evidence, to avoid the introduction and/or spread of soil borne pathogens and disease, appropriate hygiene procedures as recommended will minimise the risk of any significant impacts as a result of the proposal.</li> </ul> |
| Tree Protection | <p>The following mitigation measure will apply to the Detailed SSDA which will seek consent for physical works:</p> <ul style="list-style-type: none"> <li>• All trees to be retained must be protected in accordance with AS4970-2009 and Section 11 of the Arborist Report prepared by Urban Arbor at Appendix 19.</li> </ul>  |
| Flood           | <ul style="list-style-type: none"> <li>• In accordance with the Flood Impact Risk Assessment prepared by S&amp;G Consultants at Appendix 23, habitable floor levels are to be equal to or greater than the 1% AEP flood level plus 500mm freeboard.</li> </ul>   |
| ESD             | <p>The following mitigation measure will apply to the Detailed SSDA which will seek consent for physical works:</p> <ul style="list-style-type: none"> <li>• Achieve the sustainability targets identified within the Ecologically Sustainable Design Report prepared by Partners Energy at Appendix 20 will be implemented.</li> </ul>  |
| Contamination   | <p>The following mitigation measures will apply to the Detailed SSDA which will seek consent for physical works:</p> <ul style="list-style-type: none"> <li>• Implement the recommendations listed at Section 6 of the Preliminary Site Investigation at Appendix 12 which are as follows: <ul style="list-style-type: none"> <li>○ Undertake a hazardous materials survey(HMS) before commencement of any demolition works to confirm the presence and location of hazardous materials within the existing building fabrics. This will aid demolition management.</li> <li>○ All soil materials including surplus soil, that are designated for off-site disposal, including any virgin excavated natural material (VENM), must be pre-classified in accordance with NSW EPA (2014) Waste Classification Guidelines.</li> <li>○ Any material being imported to the site should be validated as suitable for the intended use, in accordance with NSW EPA (2014).</li> </ul> </li> </ul>   |
| Geotechnical    | <p>The following mitigation measure will apply to the Detailed SSDA which will seek consent for physical works:</p> <ul style="list-style-type: none"> <li>• Implement the recommendations listed at Section 4 of the Geotechnical Investigation at Appendix 13;including, but not limited to: <ul style="list-style-type: none"> <li>○ Preparation of a dilapidation survey;</li> </ul> </li> </ul>   |

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|                     | <ul style="list-style-type: none"> <li>○ Excavation and vibration: identify required equipment and a Noise and Vibration Management Plan (NVMP) prepared, implemented, updated and monitored</li> <li>○ Acid sulfate soils: while unlikely, further investigation into acid sulfate soils should be carried out during geotechnical investigation</li> <li>○ Concept Groundwater assessment; Drained basement design should be demonstrated by groundwater studies and seepage modelling to <i>WaterNSW Minimum Requirements</i>.</li> <li>○ Foundations: proposed buildings are to be supported by large pad footings or bored piles founding on suitable Hawkesbury Sandstone or Ashfield Shale. A piled foundation system may be considered</li> <li>• Implement the following geotechnical work recommendations listed at Section 6 of the Geotechnical Investigation: <ul style="list-style-type: none"> <li>○ A comprehensive geotechnical investigation is essential before advancing with the design and construction process. To ensure that the proposed development is built on a stable foundation, a detailed investigation should be carried out within the designated footprint of the development area.</li> <li>○ The Intrusive investigation can be used to assess the nature and sequence of the subsurface strata, including physical and mechanical properties for use in specifying geotechnical design parameters. The investigation must consist of at least five boreholes extending to a minimum depth of 5 m below the proposed excavation level.</li> </ul> </li> </ul> <p>Furthermore, geotechnical inspections and verifications may be necessary during construction to confirm that design requirements and assumptions are met. These assessments can include verifying foundation materials, assessing soil/rock bearing capacity for shallow footings, and inspecting bored piles.</p> |
| Heritage            | <ul style="list-style-type: none"> <li>• Implement the following recommendation outlined in Section 7 of the Heritage Impact Statement at Appendix 17: <ul style="list-style-type: none"> <li>○ A suitably qualified heritage consultant should be engaged to provide ongoing advice throughout the design development, contract documentation and construction stages of the project.</li> <li>○ The façade treatment including materiality should be developed in consultation with a heritage consultant, acknowledging that the facade design should not be visually dominant in the streetscape but should focus on visually breaking the development visual scale into smaller elements.</li> <li>○ Substantial landscaping should be proposed to visually soften the bulk of the development and to remain consistent with the mature landscaping existing in the streetscape.</li> <li>○ The proposed development has been assessed to have an acceptable impact on the adjacent heritage item based on the current information. However, it is noted that this application includes a concept design only and the design requires further refinement and heritage impact assessment to confirm heritage impacts.</li> </ul> </li> </ul>  |
| Noise and Vibration | <p>The following general recommendations and design advice to be adopted for the Detailed SSDA which will seek consent for physical works:</p> <ul style="list-style-type: none"> <li>• Implement the recommendations listed at Section 8 of the Acoustic Design and Construction Advice at Appendix 24 which include the following considerations (in summary): <ul style="list-style-type: none"> <li>○ Façade elements - Glazed components</li> </ul> </li> </ul>  |

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|        | <ul style="list-style-type: none"> <li>○ Architectural elements: including but not limited to: masonry and/or plasterboard walls with acoustic insulation, concrete floor slabs with suspended ceilings. A full acoustic privacy assessment be conducted to certify that sound transmission performance of proposed architectural elements will satisfy internal acoustic privacy requirements.</li> <li>○ Mechanical services: a full mechanical noise emission assessment be completed to certify that noise emission levels will not exceed the noise emission objectives. Sound power levels not to be exceeded in identified critical locations. Specific recommendations relating to attenuators, air condenser units, pumps, vibration isolation to be adopted.</li> <li>○ Basement level car park: adopt recommendations to minimise structural vibration transmission and floor slab excitation to various areas of the development and surrounding area.</li> <li>○ Building Noise Management Plan: to be prepared that outlines policies and procedures to ensure noise emission from the development is kept to a minimum (examples provided).</li> <li>○ All buildings materials specified must be tested and certified.</li> <li>● Implement the recommendations listed at Section 7 of the Construction Noise and Vibration Management Plan at Appendix 25 which include the following (in summary): <ul style="list-style-type: none"> <li>○ Prepare a Noise and Vibration Management plan</li> <li>○ Implement an appropriate community liaison procedure, including a noise management and complaint procedure and continual liaison with the nearby potentially affected receivers.</li> <li>○ If required, construct temporary noise barriers along the northern site boundary</li> <li>○ If deemed necessary by geotechnical engineer, implementation of a vibration monitoring and reporting program.</li> <li>○ Use of quietest available equipment for works</li> <li>○ Adopt appropriate excavation methodology</li> <li>○ Where there is risk of damage, complete a detailed dilapidation survey of adjacent buildings and structures prior to demolition works.</li> </ul> </li> </ul> <p>Provision of respite periods during intensive activities.</p> |
| Safety | <p>The following mitigation measure will apply to the Detailed SSDA which will seek consent for physical works:</p> <ul style="list-style-type: none"> <li>● Implement the recommendations of the CPTED Report at Appendix 31 which are as follows: <ul style="list-style-type: none"> <li><u>Surveillance</u> <ul style="list-style-type: none"> <li>- Lighting: <ul style="list-style-type: none"> <li>- Residential entrances, communal open spaces, car parks and perimeters should be well lit at night.</li> <li>- Pedestrian pathways through the site are to be well lit at night, at both foot level and from above to ensure clear visibility.</li> <li>- The vehicular access off Nelson Road to be clearly sign posted and lit at night.</li> <li>- Tamper-proof lighting should be installed at a height to sufficiently illuminate the rights of way to minimise opportunities for concealment.</li> <li>- The car parking area should be well-lit to ensure good visibility across the whole area and to reduce areas of low light where concealment may be possible.</li> </ul> </li> <li>- Natural surveillance:</li> </ul> </li> </ul> </li> </ul>   |

## Mitigation Measures

- Promote natural surveillance via balconies overlooking building entries, and over the Ground Floor communal open space;
- Landscaping:
  - Maintain sight lines to entry points via effective landscaping techniques using CPTED principles, with taller elements to the rear to reduce the potential for concealment.
  - Ensure regular maintenance of landscaping.
  - Avoid the inclusion of high walls that may create concealed or recessed areas.
- CCTV:
  - Ensure building and vehicle entries, lift lobbies, and mail areas are monitored via CCTV.
  - Ensure the car parking area, including lift lobbies, are monitored by CCTV.
  - Signage should be present to identify permanent surveillance of these areas.
- Concealment:
  - Reduce the opportunity for hiding in bushes and landscaping in secluded areas via low planting or taller trees and canopies.

### Access

- Designated fob access:
  - Fob access should enforce restricted access to residential lobbies and lifts, residential premises, basement car park and loading areas;
- Landscaping:
  - Large trees should not be planted immediately adjacent to balconies to prevent the vegetation being used as a "ladder";
- Communal open space areas:
  - These areas should be clearly designated with signage to identify who should be using communal spaces and when the spaces are accessible;
- Signage:
  - Provide signage identifying restricted and monitored areas, including the car park;
- Security:
  - Ensure use of high-quality locking systems, reinforced glass, signage and stickers.

### Territorial Reinforcement

- Fencing
  - ensure fencing or other built forms that identifies a clear distinction of areas within ground floor areas;
  - clearly delineate spaces through signage, physical separation and painted elements on the ground to identify walkways and direction cues.
- Car Park
  - rapid removal of any graffiti that may be undertaken on the site;
  - regular checks of and rapid repairs to lighting and signage and any damage on the site.

### Space Management

The proposed space management practices suggested to be implemented at the proposed development include:

- regular maintenance of the premises, including cleaning up of litter or rubbish from the car parking areas and grounds;
- regular waste removal;

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|                     | <ul style="list-style-type: none"> <li>- CCTV monitoring and access control to reduce the potential for graffiti or vandalism including: <ul style="list-style-type: none"> <li>- rapid removal of any graffiti that may be undertaken on the site;</li> <li>- regular checks of and rapid repairs to lighting and signage and any damage on the site.</li> </ul> </li> </ul> <p><u>Letterboxes</u></p> <ul style="list-style-type: none"> <li>- It is recommended that access to the letter box room/mail area be controlled by fob and monitored by CCTV so only residents, tenants and authorised mail/courier/delivery personnel can gain access.</li> </ul> |
| Waste               | <p>The following mitigation measure will apply to the Detailed SSDA which will seek consent for physical works:</p> <ul style="list-style-type: none"> <li>• Implement the Operational Waste Management Plan at Appendix 27.</li> </ul>  |