



planning consultants

## APPENDIX 3

Mitigation Measures Table

Pacific Brook Christian School – SSD 16858710

Prepared for: Pacific Brook Christian School Ltd  
November 2021

| Mitigation Measures  |   |   |
|--|---|---|
| Environmental Impact   | Mitigation Measure  | Further discussion                        |
| <b>Aboriginal Cultural Heritage</b>  | If there is any alteration to the boundaries of the proposed development to include areas not assessed as part of this archaeological investigation, further investigation of those areas should be completed to assist in managing Aboriginal objects and places which may be present in an appropriate manner.  | <b>Section 6.2.1</b><br><b>Appendix 6</b> |
|  | Should unanticipated Aboriginal archaeological material be encountered during site works, all work must cease in the vicinity of the find and an archaeologist contacted to make an assessment of the find and to advise on the course of action to be taken.   |   |
|  | Any objects confirmed to be Aboriginal in origin must be reported to Heritage NSW under Division 1, Section 89A of the NPW Act.   |   |
|  | In the unlikely event that suspected human remains are identified during construction works, all activity in the vicinity of the find must cease immediately and the find protected from harm or damage. The NSW Police and the Coroner's Office must be notified immediately. If the finds are confirmed to be human and of Aboriginal origin, further assessment by an archaeologist experienced in the assessment of human remains and consultation with both Heritage NSW and the RAPs for the project would be required. |   |
|  | Construction Environmental Management Plan should be developed for the site.  |   |
| <b>Accessibility</b>   | Minor amendments required to comply with handrail provisions on primary school buildings  | <b>Section 6.14</b><br><b>Appendix 7</b>  |
| <b>Arborist</b>  | Remove trees that are structurally unsound or hazardous and within the footprint of construction.   | <b>Section 6.4.1</b><br><b>Appendix 5</b> |
|  | Make provision for fencing around senescent and declining trees to minimise the safety hazard posed by those trees.   |   |
|  | Apply mulch 100 - 150 mm deep with a radius of at least 2 m, (or to the edge of the calculated tree protection zone where possible) around retained trees to stimulate growth of absorbing roots. For trees that will be located beneath fill, apply mulch on top of fill soils.  |   |
|  | Show tree locations and protective fencing on all construction plans used on site.  |   |
|  | Engage a qualified ecologist to inspect trees for bird nests and hollow-bearing trees before they are removed. The ecologist will provide further advice as applicable.   |   |
|  | All site activity must be excluded from tree protection zones during any future demolition and construction phases.   |   |
|  | Route all trenching for underground services outside the TPZs of retained trees. If any underground service installation or underground boring will occur within TPZs, engage an arborist to supervise the activity.  |   |
|  | Crown pruning must comply with the appropriate class of pruning described in AS4373-2007 Pruning of amenity trees and be undertaken by a qualified arborist practising modern arboricultural methods.   |   |
| Advanced stock (>300 mm pot size) must not be planted within nominated tree protection areas so as to avoid disrupting the critical root zone of protected trees |   |   |
| <b>Flood</b>   | Minimum flood planning level for the site is 148.11m AHD  | <b>Section 6.9</b><br><b>Appendix 21</b>  |
| <b>Noise - Construction</b>  | Operation of large earthmoving equipment (Bulldozers and excavators) between 7am and 8am with 30m of the south eastern boundary should be avoided.  | <b>Section 6.10</b><br><b>Appendix 20</b> |
|  | Quiet work methods/ technologies to be put in place as per Section 11.8 of Noise and Vibration Report   |   |
|  | Pneumatic/ hydraulic hammering (if required) noise impacts should be addressed via the imposition of respite periods, typically limiting operation to: <ul style="list-style-type: none"> <li>• 8am – 6pm, Monday to Friday</li> <li>• 8am to 1pm, Saturday</li> <li>• In any case maximum 3 hours operation with 1 hour uninterrupted respite.</li> </ul>  |   |

| Mitigation Measures        |   |  |
|----------------------------|---|--|
| Environmental Impact       | Mitigation Measure  | Further discussion                         |
|                            | A detailed noise management plan should be developed by the main contractor that describes in detail the construction phases, programme, processes and equipment used, noise impacts assessment and proposed mitigation and management.   |  |
| <b>Noise - Operational</b> | No openable/operable glazing is to be installed on the south-east facade or on other facades within 5m of the boundary of the nearest residential property is recommended   | <b>Section 6.10</b><br><b>Appendix 20</b>  |
|                            | A 1.8m high imperforated boundary fence extending from the waste area to near the road boundary is recommended to prevent line of sight to the kiss and drop and to achieve compliance with an acceptable background noise level.   |  |
|                            | Time restrictions are also recommended for waste removal between 7am and 6pm.   |  |
|                            | Multipurpose centre doors and other large ventilation openings should be closed after 6pm where the activity involves amplifies music or competitive sporting activities. Events should cease by 9.30pm.  |  |
|                            | Where music practice occurs within a school classroom outside of normal hours, the windows of the rooms should be kept closed.  |  |
|                            | Acoustic assessment of all mechanical plant shall continue during the detailed design phase of the project in order to confirm any noise control measures to achieve the relevant noise criteria at the nearest noise sensitive receivers.  |  |
|                            | The school bell and public address system should minimise noise spill to adjacent properties through speaker selection and positioning.   |  |
|                            | Ground maintenance should only occur between 7am and 6pm, Monday to Friday  |  |
|                            | Acoustic attenuated building envelope and the provision of an alternative ventilation system to permit the window to be closed for the buildings closer to Maitland Street. This will involve a detailed assessment prior to CC to recommend the performance of the building envelope needed to comply with the internal noise level recommendations of 'Development Near Rail Corridors and Busy Roads' Interim Guideline.   |  |
| <b>Biodiversity</b>        | <b>Clearing of Native vegetation</b> <ul style="list-style-type: none"> <li>• Avoid and minimise clearing impacts to native vegetation where possible.</li> <li>• Clearly delineate the boundaries of the project footprint to prevent any unnecessary clearing beyond its extent.</li> <li>• Ensure vehicle and equipment parking areas and stockpile areas are identified and positioned to avoid areas containing ecological value.</li> <li>• Appropriate signage such as 'no go zone' or 'environmental protection area' should be installed.</li> <li>• Identify and communicate the location of any 'no go zones' in site inductions.</li> <li>• Tree protection measures will be implemented to protect retained Eucalyptus camaldulensis and Acacia pendula trees within the site during construction. Tree protection measures should consider allowances for Tree Protection Zones in accordance with AS4970 (Standards Australia, 2009).</li> </ul> | <b>Section 6.4.2</b><br><b>Appendix 12</b> |
|                            | <b>Removal of hollow-bearing trees/ habitat trees, resulting in fauna injury and mortality</b> <ul style="list-style-type: none"> <li>• Limit removal of trees to that required within the project footprint where possible.</li> <li>• A pre-clearing protocol will be implemented during clearing works, as follows:</li> <li>• Pre-clearance surveys will be undertaken to determine if any inhabiting fauna are present;</li> <li>• A suitably qualified and trained fauna handler will be present during hollow-bearing tree clearing to rescue and relocate displaced fauna.</li> <li>• Appropriate exclusion fencing around any trees and woodland that are to be retained within the Development Site should be erected, considering allowance for Tree Protection Zones in accordance with AS4970 (Standards Australia, 2009).</li> </ul>  |  |
|                            | <b>Impacts to surface and groundwater quality and quantity due to sediment run-off and/or contaminant runoff into adjacent watercourses</b> <ul style="list-style-type: none"> <li>• Source controls such as sediment fences, mulching and jute matting will be utilised where appropriate.</li> <li>• Site-based vehicles will carry spill kits.</li> <li>• Erosion and sediment control will be required for the development in accordance with Managing Urban Stormwater: Soils and Construction (Landcom, 2004) prior to commencement of construction.</li> </ul>   |  |

| Mitigation Measures                 |   |   |
|-------------------------------------|---|---|
| Environmental Impact                | Mitigation Measure  | Further discussion                        |
|                                     | <ul style="list-style-type: none"> <li>Limit the use of pesticides in the project footprint where possible to avoid contamination of nearby watercourses/wetland areas.</li> </ul>  |   |
|                                     | <p><b>Vehicle collision with fauna</b></p> <p>Speed limits within the Development Site should be limited to 40 km/hr.</p> <p>This limit should be clearly signed at all entry points to site.</p>   |   |
| <b>Bushfire</b>                     | Bushfire Emergency Management Plan to be prepared   | <b>Section 6.14</b>                       |
|                                     | New landscaping to comply with the provisions of Appendix 4 of Planning for Bushfire Protection   | <b>Appendix 13</b>                        |
| <b>Infrastructure</b>               | A formal section 68 application will be required to be submitted to council to seek approval for any new connections made to the authority asset. Confirmation is required from Council to ascertain if any augmentation works and heads works charges are required to the existing main to cater for the increase in site demand.  | <b>Section 6.14</b><br><b>Appendix 33</b> |
|                                     | Potable supply will reticulate throughout the school as required to serve all fixtures and fittings. Where deemed necessary, backflow prevention devices shall be installed for high risks areas, such as laboratories and art classrooms.  |   |
|                                     | Consideration shall be given to the capture and harvesting of rainwater from non-trafficable roofs. Captured rainwater shall be stored in above ground tanks and shall serve irrigation and toilet flushing.  |   |
|                                     | Fire Hydrants are required to serve all buildings with a fire compartment over 500m <sup>2</sup> . It is understood that the proposed floor areas of the school trigger the requirement of 2 x hydrants to flow simultaneously, which equates to a 20L/s flow rate. All hydrant infrastructure is to be located in a strategic location and must be in sight of the main entry for the school, for the brigade to access in accordance with AS2419. |   |
|                                     | Our concept electrical infrastructure plan is for a new dedicated pad mounted kiosk substation located along Maitland Street near main entrance and centrally located to the site. Based on maximum demand of 822A the estimated kiosk substation size will be 750Kva.  |   |
| <b>Sustainability</b>               | During construction a minimum of 80% of waste to be recycled  | <b>Section 6.12</b><br><b>Appendix 19</b> |
|                                     | Local indigenous planting will be provided to the development in accordance Aboriginal culture heritage values identified under Environment Impact Statement (EIS). Indigenous plants are drought resistant and allow for reduced water consumption.  |   |
|                                     | PV panels, use of natural and low GWP refrigerant. Natural cross ventilation, natural lighting shall be explored and potentially employed on the project.   |   |
| <b>Geotechnical/ Remediation</b>    | Contaminated soils/ materials are to be remediated prior to building works commencing on-site   | <b>Section 6.6 &amp; 6.8</b>              |
|                                     | Accredited site auditor to certify remediation works.   | <b>Appendix 17, 18, 22, 29 &amp; 30</b>   |
|                                     | Accredited site auditor to certify remediation works.   |   |
| <b>Hazardous Building Materials</b> | Hazardous materials not being removed under separate DA are to be removed in accordance with the recommendations on the Hazardous Buildings Material Report.  | <b>Section 6.7</b><br><b>Appendix 23</b>  |
| <b>Transport/ traffic</b>           | Undertake further correspondence with Council re: footpath/ cycleway along Maitland Street  | <b>Section 6.3</b><br><b>Appendix 31</b>  |
|                                     | Ensure waste collection and deliveries are outside of peak student arrival/ departure times   |   |
|                                     | Staggered bell times to reduce traffic queuing  |   |
| <b>Buses</b>                        | Staff to ensure safe student access to bus bay on Maitland Street.  | <b>Section 6.3</b>                        |
| <b>Active Transport</b>             | 6 bicycle spaces provided for Stage 1, 36 bicycle spaces provided for masterplan  | <b>Appendix 31</b>                        |
|                                     | Provide end of trip facility  |   |

| <b>Mitigation Measures</b>  |   |   |
|-----------------------------|---|---|
| <b>Environmental Impact</b> | <b>Mitigation Measure</b>   | <b>Further discussion</b>                 |
| <b>Parking</b>              | Provide 1 accessible car parking space within the car park              |   |
| <b>Construction Traffic</b> | Construction traffic to enter and exit the site in a forward direction. |   |
| <b>Erosion and Sediment</b> | Implement erosion and sediment control plans.                           | <b>Section 6.15</b><br><b>Appendix 14</b> |