

## Appendix AA

### Recommended Mitigation Measures – October 2023

Issue	Mitigation Measure	Timing
Approved Documentation	The works / activity shall be carried out in accordance with the report, plans, and documents as set out in the Appendix Schedule of the REF proper.	At all times
Agency / authority approvals	<p>These conditions do not remove any obligation to obtain all other licences, permits, approvals and land owner consents from all relevant authorities and land owners as required under any other legislation for the Project. The terms and conditions of such licences, permits, approvals and permissions must be complied with at all times. A copy of all approvals is to be kept on site.</p> <p>In this instance, in the event of 'roadworks' outside of the property boundary on the public footpath or roadway which are subject to the <i>Roads Act 1993</i>, consultation shall occur with Council's Infrastructure Department, and any application made accordingly.</p>	Prior to the commencement of the relevant road-related works.
Traffic, Access and Parking (Construction)	A Construction Traffic Management Plan (CTMP) shall be developed in consultation with Transport for NSW and Broken Hill City Council to seek to minimise traffic, transport and parking impacts during the construction stages of the project, especially whilst the hospital remains operational. The CTMP shall address such matters as the type of construction vehicles, construction transport routes, on-site construction parking, pedestrian management, dilapidation surveys, traffic control plans, including detours and signage, and details of measures to minimise conflicts with other road users or users of the site.	Prior to the commencement of works.
Noise and Vibration (Construction)	<p>A final and comprehensive Construction Noise and Vibration Management Plan shall be prepared addressing physical and noise management measures to be employed during works to limit the likely impacts upon receiver within and outside of the hospital.</p> <p>The Construction Noise and Vibration Management Plan (CNVMP) shall be prepared based on the contractors proposed plant, equipment, and construction methodology.</p> <p>Measures shall include, but not be limited to, the followings as set out in Section 7.5, 7.6 and 7.7 of Acoustic Studio's assessment:</p> <ul style="list-style-type: none"> <li>• Scheduling, Duration and Respite Periods</li> <li>• Noise Barriers or Screening</li> <li>• Alternative construction methodology or equipment</li> <li>• Communication</li> <li>• Complaints management</li> <li>• Implementation of all reasonable and feasible mitigation measures</li> <li>• Construction traffic vehicle generation plus noise feasible and reasonable mitigation strategies. This will also include strategies and advice to heavy vehicle drivers to limit noise generation by avoiding heavy acceleration, plus limiting idling, engine braking and use of horns.</li> <li>• General control elements <ul style="list-style-type: none"> <li>○ Plant and Equipment</li> <li>○ On-site Noise Management</li> <li>○ Consultation, notification, and complaints handling</li> <li>○ Work Scheduling</li> </ul> </li> <li>• Noise and Vibration monitoring and reporting</li> </ul>	Prior to the commencement of works / certification

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	<ul style="list-style-type: none"> <li>Non-compliances</li> </ul>	
	<p>Noise from construction traffic should be dealt with by appropriate management measures that minimise noise impact. This includes:</p> <ul style="list-style-type: none"> <li>Staging and managing arrival of trucks to avoid queueing and idling on public streets.</li> <li>Arriving at and departing from the site via designated routes that avoid or minimise the use of local roads.</li> <li>Minimising reversing to minimise the use of movement alarms ("reversing beepers") and / or incorporating quacker alarms.</li> <li>Minimise the use of engine braking and to avoid noise actions such as slamming doors, loud radios, shouting or the use of truck horns for signalling.</li> </ul>	During works.
Noise and Vibration (Operation)	<p>Mechanical plant and equipment associated with the operation of the development is to be controlled to ensure external noise emissions are not intrusive and do not impact on the amenity of neighbouring receivers in accordance with the relevant criteria established in Section 6.2 of the approved Acoustic Studio Noise and Vibration Impact Assessment.</p> <p>Accordingly, acoustic detailed design advice shall be provided to the architect and services engineers to ensure that noise emissions from plant and equipment are effectively controlled to meet the relevant criteria at the nearest receiver boundaries.</p> <p>General design considerations and controls that may need to be implemented typically include, but are not limited to:</p> <ul style="list-style-type: none"> <li>Strategic selection and location of plant to ensure the cumulative noise contribution at the receiver boundary is achieved, and/or</li> <li>Noise control measures to be put in place to minimise noise impacts such as: <ul style="list-style-type: none"> <li>Noise enclosures or barriers/screening as required.</li> <li>Acoustic louvres as required.</li> <li>In-duct attenuation.</li> <li>Sound absorptive panels</li> </ul> </li> </ul>	During the Detailed Design phase of the works and prior to the commencement of works / certification
Dust and Air Quality	<p>A final Construction Management Plan (CMP) shall be prepared, addressing dust and air quality measures (amongst a fuller range of construction impact mitigation measures) to limit the potential for dust and air quality impacts upon the hospital and sensitive receivers outside of the hospital.</p> <p>An Air Quality Management Strategy (as set out in Section 6 of the JBS&amp;G Air Quality Assessment) shall be prepared to include and address the following matters:</p> <ul style="list-style-type: none"> <li>General controls required for the work area</li> <li>Diesel particulate matter exposure monitoring</li> <li>Real-time respirable particulate (dust) monitoring</li> <li>Visual monitoring</li> <li>Dust management</li> <li>Odour management.</li> </ul>	Prior to commencement of works.
Salinity	<p>The recommendations of the PSM Broken Hill Hospital Redevelopment Salinity Management Plan shall be adopted at all times, particularly in relation to:</p> <ul style="list-style-type: none"> <li>Earthworks</li> <li>Importation of Soil</li> </ul>	Prior to the commencement of works, during works, and prior to certification.

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- Gardens and Landscaped Areas
- Roads, Footpaths, and Hardstand Areas
- Surface Water, Stormwater and Drainage
- Durability of Concrete Structures in Contact with the Ground

Soil Management	<p>To manage run-off from stormwater during works, the Erosion and Sediment Control Plan for the site as prepared and provided by TTW shall be employed.</p> <p>The measures applied shall be consistent with Erosion and sediment control - Managing Urban Stormwater: Soils and Construction (Landcom, 2004) (the Blue Book).</p>	During works.
Aboriginal heritage matters	<p>The proposed work may proceed within the study areas without further archaeological investigation under the following conditions:</p> <p>a) All land and ground disturbance activities must be confined to within the study area, as this will eliminate the risk of harm to Aboriginal objects in adjacent landforms. Should the parameters of the proposal extend beyond the assessed areas, then further archaeological assessment may be required.</p> <p>b) All staff and contractors involved in the proposed work should be made aware of the legislative protection requirements for all Aboriginal sites and objects.</p> <p>If during works Aboriginal artefacts or skeletal material are noted, all work should cease and the procedures in the Unanticipated Finds Protocol (Appendix 2 of the OzArk assessment) be followed.</p> <p>Inductions for work crews shall include a cultural heritage awareness procedure to ensure they recognise Aboriginal artefacts (see Appendix 3 of the OzArk assessment) and are aware of the legislative protection of Aboriginal objects under the <i>National Parks and Wildlife Act 1974</i> (NPW Act) and the contents of the Unanticipated Finds Protocol.</p> <p>The information presented in the OzArk assessment meets the requirements of the Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales and it shall be retained as shelf documentation for five years as it may be used to support a defence against prosecution in the event of unanticipated harm to Aboriginal objects.</p>	During works.
Non-Aboriginal cultural heritage matters	<p>In the event the proposal changes in plan design resulting in impacts outside the proposal footprint, further investigation will be required.</p> <p>The recommended Unanticipated Finds Protocol from OzArk's Heritage Impact Statement (see Appendix 1 of the OzArk Report) shall be followed if potential significant heritage items are encountered during works and construction.</p>	<p>Prior to the commencement of works outside of the footprint of the works and differing in design from the approved works.</p> <p>During works.</p>
Arboricultural matters	<p>As set out in the TreeIQ Arboricultural Report, the only trees able to be removed are Trees 4-7, 36, 107-132, 135-138, 140, 160, 161, 163-168, 171-173, 175-181, 183-186, 188, 189, 192, 194-196, 200, 202, 213, 214 &amp; 215, in order to accommodate the proposed Stage 1 and 2 development works. Further Trees 52, 169, 187, 191, 199 and 201 are dead are also able to be removed.</p>	During works.

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	Replacement Tree Planting (of 84 trees) is to be carried out consistent with the approved design statement by Taylor Brammer, and in particular its Planting Schedule found at "Planting Character" on page 16 of the REF Design Report – Landscape Architecture.	During works.
	Replacement trees should be installed within the hospital site to help off-set the loss of canopy cover from the tree removal. New trees should be grown in accordance with Australian Standard 2303 Tree Stock for Landscape Use (2015).	During works.
	All other trees must be retained and protected consistent with the TreeIQ Arboricultural Report as set out in Sections 3.3, 3.4, 3.5, 3.7 and 3.8 and the Appendices of that report.	During works and operation.
Ecological / Biodiversity matters	<p>Table 7-1. All 33 mitigation measures and environmental safeguards of the OzArk Biodiversity Assessment Report shall be implemented in full with respect to:</p> <ul style="list-style-type: none"> <li>• General matters</li> <li>• Clearing of native vegetation (including habitat trees)</li> <li>• Impacts to habitat features</li> <li>• Light</li> <li>• Soil Management</li> <li>• Introduction and spread of priority weeds and pathogens</li> <li>• Disturbance of fallen timber, dead wood, and bush rock</li> <li>• Rehabilitating cleared areas</li> <li>• Exacerbating invasive fauna</li> <li>• Increased risk of fire</li> </ul>	<p>Variously:</p> <ul style="list-style-type: none"> <li>• prior to construction,</li> <li>• during works,</li> <li>• prior to the commencement of operation, and</li> <li>• ongoing during the operation of the new works.</li> </ul>
Contamination matters arising from the Detailed Site Investigation	<p>A RAP should be prepared and implemented in accordance with the relevant regulatory requirements that documents the procedures and standards to be followed in order to address the identified asbestos impacted soils and data gaps as to make the site suitable for the proposed future uses.</p> <p>A redevelopment/remediation specific Asbestos Management Plan (AMP) should be developed for the proposed remediation and redevelopment works.</p> <p>A site management strategy is required to address the presence of bonded ACM in surface soils at MH-BH10. It is noted that the DSI investigation was limited to the MHU and ED footprints provided at the time of investigation. Given the potential for contamination in specific areas across the broader hospital campus, such as asbestos and/or lead impacted soils in areas of historical building demolition, its recommended that validation data gap sampling should be completed in the additional site areas added post assessment</p>	Prior to the commencement of works
Remediation matters arising from the RAP	<p>Areas not previously assessed, as shown in Figure 5 of the RAP, are subject to pre-remediation data gap validation sampling to inform potential contamination in this portion of the site.</p> <p>The vertical extent of known remediation at MH-B10 is limited to the vertical depth of surficial asbestos contaminated fill to a maximum of 100 mm (surface soils), with consideration to the specific design options for the site which may form permanent capping layers (such as permanent slabs underlying the proposed building footprint, car park access roadways etc.). The vertical extent of unknown contamination associated with the new redevelopment areas is to be determined via data gap validation sampling during pre-remediation works.</p>	Prior to the commencement of works.

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	<p>The processes outlined in the JBS&amp;G RAP shall be implemented.</p> <p>This includes the following documentation be developed and implemented to ensure the risks and impacts during remediation works are controlled in an appropriate manner:</p> <ul style="list-style-type: none"> <li>• Implementation of the Asbestos Management Plan (AMP) which forms part of this REF's approved documentation for the redevelopment footprint, which details the safe implementation of the RAP in undertaking asbestos removal, as guided by the WH&amp;S regulatory framework (SafeWork NSW);</li> <li>• A CEMP, to document the monitoring and management measures required to control the environmental impacts of the works and ensure the validation protocols are being addressed; and</li> <li>• A Work Health and Safety Management Plan (WHSP) to document the procedures to be followed to manage the risks posed to the health of the remediation workforce.</li> </ul> <p>The CEMP and WHSP will require to be cognisant of the potential occurrence and storage / handling of asbestos contaminated soils on the site.</p>	<p>Prior to and during remediation-related works.</p>
Contamination – ongoing	<p>Development and implementation of an unexpected finds protocol shall be undertaken before and during the proposed development works.</p>	<p>Prior to the commencement of works, and during, works.</p>
Hazardous Building Materials matters	<p>The person with management or control of the site, must ensure so far as is reasonably practicable that the identified hazardous materials are removed prior to the commencement of demolition works. The identified and suspected hazardous materials are presented in the Hazardous Materials Register included as Appendix W in the JBS&amp;G Pre-Demolition Hazardous Building Materials Survey.</p> <p>The works shall adhere to and adopt the detailed recommendations and requirements of Section 5 of the JBS&amp;G Pre-Demolition Hazardous Building Materials Survey in relation to:</p> <ul style="list-style-type: none"> <li>• Hazardous Materials generally</li> <li>• Lead Containing Dust</li> <li>• Synthetic Mineral Fibres</li> </ul> <p>Due to elevated levels of lead containing dust being detected, all ground workers shall wear P2 respiratory protection during demolition activities of the structure. Plant operators must also keep cabin doors closed and air conditioning set to recycle during the completion of demolition of these structures. Care should also be taken to minimise dust generation during demolition activities.</p> <p>Synthetic mineral fibres (SMF) can be removed with the building and demolition waste with care taken not to generate fibres. Appropriate PPE is recommended including the use of P2 respirator as minimum and appropriate removal methodology as outlined in [NOHSC: 1004(1990)] and [NOHSC: 2006(1990)].</p> <p>Should any additional suspected hazardous materials be observed during or prior to demolition works, works should cease until a suitably qualified occupational hygienist can assess the suspected.</p>	<p>Prior to the commncement of works.</p> <p>Prior to the commencement, and during the carrying out of, works.</p> <p>During works.</p> <p>During works.</p> <p>Prior to the commencement of works and during works.</p>

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Construction Management	<p>A final Construction Management Plan, including a Traffic and Pedestrian Management Plan and Construction Waste Management Plan, generally consistent with the requirements as set out in the preliminary Construction Management Plan prepared by HI / Acorn Project Advisory, shall be developed by the appointed contractor prior to commencement of the works.</p> <p>The hours of works shall be set out in the preliminary Construction Management Plan, namely:</p> <ul style="list-style-type: none"><li>Monday to Friday ..... 7:00AM to 6:00PM</li><li>Saturdays ..... 8:00AM to 1:00PM</li><li>Sundays and Public Holidays..... No works.</li></ul> <p>Entry and departure of vehicles from the site will be restricted to the imposed work hours.</p> <p>Notwithstanding the above, activities may be undertaken outside of these hours, if required:</p> <ul style="list-style-type: none"><li>By the police or a public authority for the delivery of vehicles, plant or materials; or</li><li>In an emergency to avoid the loss of life, damage to property or to prevent environmental harm.</li><li>Where the works are inaudible at the nearest external sensitive receiver, a disruption notice has been issued by the relevant Local Area Health District (LHD) or hospital and a letter of support has been provided from the relevant LHD or hospital for the Out of Hours Works.</li></ul> <p>Consideration will be given to extending these hours to allow for specific work tasks on a case by case basis, subject to approval from HI being sought prior to this occurring and the assessment of any impact of this extension.</p>	Prior to the commencement of works, and as required during works.
Construction Waste Management	<p>A formal Construction Waste Management Plan shall be produced by the Main Contractor, setting out the principles and methodologies for waste handling and separation, with reference to the approved Tandem Solutions' Operational, Demolition, and Construction Waste Management Plan. Reference shall be made to Section 7, 8 and 9 of that report.</p> <p>Waste materials shall be separated into those that can be recycled, reused, or other disposed of. The objective of the Plan will be to ensure waste is minimised and that as much material is recycled and/or reused as possible.</p> <p>All material that cannot be recycled or reused will be disposed to an approved landfill facility.</p>	Prior to the commencement of works.
Operational Waste Management	<p>Operational Waste Management shall accord with the review and recommendations within Sections 2 and 3 of the approved Tandem Solutions' Operational, Demolition, and Construction Waste Management Plan.</p>	During Operation.

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