

# LIVERPOOL HEALTH & ACADEMIC PRECINCT HERITAGE AND ARCHAEOLOGICAL MANAGEMENT SUB PLAN

12/08/2020 | Revision No: 10



Sub Plan Revision Status				
Date	Revision (in numbers)	Purpose and Summary of Amendments	Reviewed by	Approved by
30/01/17	2	General update including LLB GMR and legislative amendments	Tracey Wallbridge	Brian Falls
12/8/20	3	General Update	Tracey Wallbridge	Ross Trethewey
03/06/2021	DRAFT	LHAP site specific information	Daisy Badel	Michael Niedzwiecki
07/07/2021	Rev 1	Draft approved review only	Lilly Cauchi	Michael Niedzwiecki
05/08/2021	Rev 2	Plan reviewed as per JohnStaff comments	Lilly Cauchi	Daniel Puljic
17/11/2021	Rev 3	Review only no changes	Ian Sheils	Daniel Puljic
09/12/2021	Rev 4	General update to key issues and risks	Ian Sheils	Daniel Puljic
02/03/2022	Rev 5	Review only no changes	Ian Sheils	Daniel Puljic
02/06/2022	Rev 6	Review only no changes	Dylan Stewart	Daniel Puljic
02/09/2022	Rev 7	Review only no changes	Dylan Stewart	Daniel Puljic
02/12/2022	Rev 8	Review only no changes	Dylan Stewart	Daniel Puljic
05/05/2023	Rev 9	Lendlease Building changed to Lendlease Construction	Nigel Rose	Daniel Puljic
07/11/2023	Rev 10	General review & updated EMD	Nigel Rose	Daniel Puljic

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## 1. SCOPE OF PROJECT AND SUB PLAN

Project Details	
Scope of the Sub Plan	<p>This Heritage and Archaeological Management Sub Plan provides control measures for the protection and management of known and unexpected heritage and archaeological items and features including, but not limited to, trees, buildings, structures, artefacts, relics, human remains and places.</p> <p>Refer to Section 1.1 and 3.1 of the Project EHS Management Plan for clarification on how the EHS Sub Plans form part of the Lend lease Building (LLC) EHS management system.</p>
Objectives of the Sub Plan	<ul style="list-style-type: none"> <li>• To protect or conserve (where possible) known Indigenous and Non-indigenous heritage and archaeological items and features on and adjacent to the site.</li> <li>• To protect and conserve (where possible) previously undiscovered heritage and archaeological items and features on or adjacent to the site.</li> <li>• To manage heritage and archaeological items and features impacted by construction in accordance with regulatory requirements.</li> </ul>
Scope of Works	<p>This Sub Plan has been prepared based on consideration of the following scope of works:</p> <p>The Liverpool Hospital is a Principal Group A1 tertiary referral hospital, managed by South Western Sydney Local Health District (SWSLHD). Liverpool Hospital currently has 713 inpatient beds and provides a wide range of tertiary and quaternary services. The redevelopment will increase the inpatient bed numbers to 900, as well as expanding tertiary and quaternary services.</p> <p>The site is partly located in a Heritage Conservation Area and is proximate to a number of local heritage items. A Heritage Impact Statement and an Aboriginal Cultural Heritage Assessment Report (ACHAR) will be prepared to assess the impacts of the proposed development on the heritage significance</p> <ul style="list-style-type: none"> <li>• Site establishment including office and compound setup.</li> <li>• Demolition of Thomas &amp; Rachel Moore education centre, Alex Grimson, Oncology and Pathology buildings.</li> <li>• Excavation of approximately 10,000m<sup>3</sup> of material and backfilling of approximately 4,00m<sup>3</sup> of clean fill.</li> <li>• Installation of bored &amp; Continuous Flight Auguring (CFA) type piles</li> <li>• Construction of new Integrated Services Buildings over 2 stages, including basements to each,</li> <li>• Refurbishment of numerous areas within the existing Caroline Chisholm and Clinical Services Building of the hospital</li> </ul>

Project Details	
	<ul style="list-style-type: none"> <li>● Construction of Campbell St shared Zone</li> <li>● On Grade Car Park Works,</li> <li>● External works</li> </ul>
Key Issues and Risks	<p>The heritage and archaeological assessment Aboriginal Cultural Heritage Assessment Report and the prepared by RPS Heritage Consultant for the site indicates that the following items and features are known surrounding the site.</p> <ul style="list-style-type: none"> <li>● The local street network identified as “Plan of Town of Liverpool (early town centre street layout-hoddle 1827</li> <li>● Liverpool College (TAFE) site, including block G &amp; A, chimneystack, fences, gatehouses, and archaeological features (formerly Liverpool Hospital and Benevolent Asylum</li> <li>● Bigge Park</li> <li>● Cast iron letterbox (close to the corner of College and Elizabeth Street)</li> </ul> <p>Overall, the site is considered to have a low/med archaeological potential for unexpected finds.</p> <p>Consultation is required with archaeologist excavation supervisor where the construction activities have greatest potential to impact on heritage and archaeological features, i.e.</p> <ul style="list-style-type: none"> <li>● Demolition where heritage structures are impacted (directly and indirectly).</li> <li>● Demolition and plant movements generating vibration and impacting heritage structures by causing cracking or instability;</li> <li>● Bulk excavation, spoil handling and stockpiling resulting in the disturbance, damage or removal of artefacts from their original position;</li> <li>● Bulk excavation resulting in changes to significant landforms or places;</li> <li>● Service excavation resulting in soil disturbance and damage to in-ground items;</li> </ul> <p>The implementation of the control measures identified in the EHS Plan, the Workplace Delivery Code (WDC) and this Sub Plan are intended to mitigate the risks and impacts associated with these activities.</p>
Legislation and Guidelines	<p><b>Federal/National:</b></p> <p>Environment Protection and Biodiversity Conservation Act 1999</p> <p>Aboriginal and Torres Strait Islander Heritage Protection Act</p> <p>National Parks and Wildlife Act 1797</p>

## Project Details

Ask First: A Guide to Respecting Indigenous Places and Values (Australian Heritage Commission)

**State:**

State Environmental Planning Policy (State and Regional Development) 2011

Environmental Planning and Assessment Act 1979

**Local:**

Liverpool LEP 2008

**Lendlease Requirements:**

- GMR: 4.13 Degradation or Pollution of the Environment
- GMR: 4.15 Uncontrolled Release of Stored Energy (non-electrical))
- Lendlease Construction Workplace Delivery Code (WDC)
- PR143932 Archaeological Research and Design Excavation Methodology

**SDDA – 10389**

**Archaeological Salvage – Historic Archaeology**

**B23.** Prior to the commencement of construction, a suitably qualified and experienced historical archaeologist, who meets Heritage Council of NSW's Criteria for assessing Excavation Directors, must be nominated to manage a historical archaeological program.

**B24.** Prior to the commencement of construction, an Archaeological Research Design and Excavation Methodology must be prepared to the satisfaction of the Planning Secretary to guide the historical archaeological program. It must be prepared in accordance with Heritage Council of NSW guidelines and in consultation with Heritage NSW. The final approved Archaeological Research Design and Excavation Methodology must be provided to Council.

**Archaeological Salvage – Historic Archaeology**

**C10.** The historical archaeological program is to be undertaken in accordance with the approved Archaeological Research Design and Excavation Methodology under condition B24.

**C11.** A final archaeological excavation report must be prepared within 12 months of the completion of archaeological excavation. The report must include details of any significant artefacts recovered, where they were located and details of their ongoing conservation and protection in perpetuity. Copies of the final excavation report must be provided to the Planning Secretary, Heritage NSW, and Liverpool Council's local studies unit.

Project Details	
	<p><b>Heritage Interpretation Strategy</b></p> <p><b>C12.</b> A Heritage Interpretation Strategy (HIS) must be prepared within 12 months of the completion of archaeological excavation, in consultation with Heritage NSW, and submitted to the Planning Secretary and Council. The HIS must ensure that the final design (building and landscaping) incorporates the results of previous and current archaeological excavations undertaken at Liverpool Hospital. This must include key results from the final excavation reports (prepared by Higginbotham, 1995 and AHMS, 2009) including artefacts, and where these can be located. Where relevant this should include information on the display and housing of artefacts.</p> <p><b>Unexpected Finds Protocol – Aboriginal Heritage</b></p> <p><b>C32.</b> In the event that surface disturbance identifies a new Aboriginal object, all works must halt in the immediate area to prevent any further impacts to the object(s). A suitably qualified archaeologist and the registered Aboriginal representatives must be contacted to determine the significance of the object(s). The site must be registered in the Aboriginal Heritage Information Management System (AHIMS) which is managed by Heritage NSW and the management outcome for the site included in the information provided to AHIMS. The Applicant must consult with the Aboriginal community representatives, the archaeologists, and Heritage NSW to develop and implement management strategies for all objects/sites. Works may only recommence with the written approval of Heritage NSW.</p> <p><b>Unexpected Finds Protocol – Historic Heritage</b></p> <p><b>C33.</b> If any unexpected archaeological relics are uncovered during the work, then all works must cease immediately in that area and Heritage NSW contacted. Depending on the possible significance of the relics, an archaeological assessment and management strategy may be required before further works can continue in that area. Works may only recommence with the written approval of Heritage NSW.</p>
Summary of Site Controls	<p>Works must be undertaken in accordance with the Lendlease Global Minimum Requirements, the Project EHS Plan, this Sub Plan and the Lendlease Construction Workplace Delivery Code. These documents detail Lendlease’s approach and commitment to pro-active and responsible site management.</p> <p>Site specific controls, monitoring, reporting and performance measurements have been identified in this Sub Plan to prevent or minimise the impacts of construction on heritage and archaeological items and features. These include but are not limited to:</p> <ul style="list-style-type: none"> <li>● The installation of protective fencing and signage.</li> <li>● The establishment of ‘buffer zones’ for vibration and access control.</li> <li>● The appropriate selection of plant and equipment;</li> <li>● Monitoring of early ground stripping and disturbance works (in conjunction with appropriate stakeholders);</li> <li>● The implementation of an Unexpected Find Protocol for previously unidentified items (refer below).</li> <li>● Methodology to be in accordance with PR143932 Archaeological Research and Design Excavation Methodology completed by the RPS Group.</li> </ul>

Project Details	
	<ul style="list-style-type: none"> <li>● Post Excavation Reporting - Throughout the archaeological programme, weekly summaries would be provided to Health Infrastructure and HNSW. A summary and overview report would be prepared within one month of the conclusion of archaeological investigations and submitted to HNSW. The results of all historical archaeological investigations would be collated into one over-arching historical excavation report in accordance with the relevant conditions of consent. The archaeological investigation report should be submitted to HNSW within 12 months of the completion of all archaeological investigations.</li> <li>● A Heritage/Archaeological assessment/survey must be available and communicated prior to any works commencing including site establishment.</li> </ul> <p>The requirements of the assessment/survey must be incorporated into this Sub Plan and detailed on the Environmental Management Diagram (EMD) included in Appendix 1.</p> <p>Construction stage heritage and archaeological management requirements must be included in relevant specifications, contract agreements, quality assurance documents, and subcontractor work method statements.</p> <p>Site inspections, monitoring and reporting will be undertaken by Lendlease, and subcontractors as detailed in the EHS Plan and the following implementation table.</p>
Unexpected Find Protocol	<ol style="list-style-type: none"> <li>1. Cease work, turn off machines and clear the area immediately if a potential burial site or item of heritage or archaeological significance has been discovered or is suspected.</li> <li>2. Contact the EHS Coordinator, Site Manager or Construction Manager immediately.</li> <li>3. Construction Manager to notify Principal Representative upon becoming aware of any unexpected finds</li> <li>4. Erect barricades to isolate the immediate area and prevent entry. Establish a buffer of 10m between the potential heritage/ archaeological item and the barrier (as a minimum where possible).</li> <li>5. Heritage NSW must be contacted as soon as possible.</li> <li>6. No person shall enter the barricaded area unless expressly permitted by the qualified Heritage /Archaeological specialist. A clearance certificate or approval should be given in writing prior to entry.</li> <li>7. Sampling / inspection of the fine is to be carried out by the Heritage /Archaeological specialist as advised by the LLC construction manager.</li> <li>8. The nominated Heritage /Archaeological Specialist (in liaison with LLC senior site personnel and/or relevant authorities) will determine if further management actions are necessary based on an available information.</li> <li>9. All permits to carry out additional actions are to be obtained prior to the commencement of any new works and the nominated Environmental Specialist must provide written clearance approval.</li> <li>10. The barricade may then be removed and work activities may resume under the direction of the LLC Construction Manager.</li> </ol> <p>Note: For unexpected finds involving human skeletal remains, contact must be made with local Police. The area must be secured immediately.</p>

## 2. IMPLEMENTATION OF THE SUB PLAN

Control Measure	Timing	Methodology	Responsibility	Monitoring and Reporting	Performance Measurement
<b>Planning and Site Establishment</b>					
Obtain a heritage/archaeological survey/report to identify the significance of the site and any surrounding areas/features/buildings/trees.	Prior to works commencing	In consultation with a specialist prepare: *a list of items and areas of significance; *an Environmental Management Diagram (EMD – Appendix 1) showing the location of <i>known</i> heritage items areas; *a heritage zoning plan showing areas with high, medium and/or low heritage 'potential'.	CM SM	List of items and areas of significance prepared and communicated. Diagram prepared and reviewed. Heritage zoning plan prepared.	List and diagram prepared containing all relevant details and communicated prior to commencing any works.
Undertake a dilapidation survey of nominated heritage structures/items.	Prior to works commencing	Engage consultant to undertaken surveys. Obtain dilapidation reports. Review and use the reports for planning ground disturbance and construction activities.	CM SM SPE	Dilapidation reports prepared and reviewed.	No damage to existing heritage structures or items.
Include information in the Site Induction about the potential impacts of construction activities on known and previously unidentified heritage/archaeology.	Before works commence and ongoing	Revise Lendlease standard induction package to include site specific information. Deliver induction material.	CM SM	WMSs prepared by subcontractors address heritage issues.	Site induction delivered to all workers on site.



Control Measure	Timing	Methodology	Responsibility	Monitoring and Reporting	Performance Measurement
Install barriers/protective fencing and clear signage to control access to known heritage areas until approval to enter or excavate is obtained.	Prior to works commencing	Install access controls in accordance with heritage consultant recommendations. Do not permit access without CM approval.	SM	Daily surveillance to assess integrity of barriers/fencing. Weekly/monthly inspection	No access into significant areas. Barriers/fencing not removed until a clearance certificate is provided by heritage consultant.
Monitor ground stripping/disturbance and spoil handling activities (where works have been approved to proceed for site establishment or clearing).	Areas of potential impact identified prior to works commencing	Obtain approval to commence works. (Early excavation of potential archaeological deposits (PAD) may be required). Establish a protocol and work method for ground disturbance works. May involve visual monitoring of surface disturbance and spoil by specialist consultant or external representatives (e.g., LALC). Ensure appropriate external representatives are involved as required.	CM SM	Surveillance during earthworks. WMS	No unnecessary land disturbance. No disturbance of identified areas without approval. Protective fencing and signage maintained until a clearance certificate has been issued.
<b>During Construction</b>					
Maintain protective fences/barriers/signage as per the Environmental Management Diagram.	At all times	Check the condition and integrity of controls. Address the importance of controls and access restrictions in toolbox talks	SM	Daily surveillance. Weekly inspection checklist. Update EMD as works progress.	No breach of fence line.
Minimise the potential for damage to heritage structures through the appropriate selection of work methods,	At all times	Prepare WMS for all works affecting or close to heritage items/structures.	CM SM	WMS for works near heritage structures/items.	No damage to existing structures or items.

Control Measure	Timing	Methodology	Responsibility	Monitoring and Reporting	Performance Measurement
plant and equipment, and the establishment of buffer zones.		Use appropriately sized plant and equipment to minimise ground vibration and reduce the potential for damage to relics. Establish safe use buffer zones.	SPE		Compliance with WMS.
Obtain permits to carry out archaeological investigations or excavations PRIOR to the commencement of works. Archaeologist excavation supervisor to be present when excavating	At all times and after discovery of relic	In accordance Heritage & Archaeological Management Plan.	CM SPE	Monitor compliance.	Sighting permit and Archaeologist excavation supervisor present
Enact the Unexpected Find Protocol in the event that a potential heritage item, artefact or relic is discovered.	At any time	Cease work immediately.	SM	Monitor earthworks. Maintain site records of any findings.	No construction impact to unexpected finds Protocols followed Sighting permit

# APPENDIX 1 ENVIRONMENTAL MANAGEMENT DIAGRAM (EMD)

## ENVIRONMENTAL MANAGEMENT DIAGRAM – LIVERPOOL HEALTH & ACADEMIC PRECINCT PROJECT



EXTENT MAP



LEGEND

Icon	Descriptions
	Site Accommodation
	A-Class Hoarding
	Shaker Grid
	Spill Kit
	HS / DG Storage
	Tree Protection Zone
	Stormwater Inlet
	Radiation Monitor
	Noise Monitor
	Ground Vibration Monitor
	Rubbish Skip

**KEY ENVIRONMENTAL ISSUES**

- Unexpected finds
- Noise to general public / Hospital
- Water run off
- Sediment run off

**SENSITIVE RECEPTORS**

- Local Residents in Goulburn & Campbell Streets
- Alex Grimson Building
- Caroline Chisholm Building
- Existing Clinical Services Building
- Liverpool TAFE – College Street Campus
- Ingham Institute

**KEY CONTROL MEASURES**

- Blue metal to cap exposed soil
- Geofabric under pit grates to stormwater inlets to filter water
- Radiation monitoring of cancer bunker
- Shaker grid located inside of gates 2 & 3
- High pressure washer to clean tyres in inclement weather

**KEY CONTACTS**

<b>Senior Construction Manager</b> Daniel Puljic 0477 393 259	<b>Senior Site Manager</b> Damien Smith 0437 559 361	<b>General Foreman</b> James Hall 0429 801 618	<b>Senior EHS Coordinator</b> Nigel Rose 0428 741 878	<b>Emergency Services</b> 000
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