LIVERPOOL HEALTH AND ACADEMIC PRECINCT – STAGE 2 & 3

AIR QUALITY MANAGEMENT SUB PLAN

31/01/2024 | Issue No: 1.0

Introduction and Purpose

The Environmental Management Sub Plan forms part of the Workplace's EHS Management Plan and focuses on specific environmental risks that have been identified at the project's location through the Environmental Assessment reports and project approvals or permits including:

- SSDA 10388 and 10389
- Environmental Impact Statement

The Environment Management Sub Plan is to be read in conjunction with the Workplace EHS Management Plan, Global Minimum Requirements, and Workplace Delivery Code.

Objectives

The objectives of the Environmental Sub Plan are:

- To identify controls to manage project environmental impacts.
- To document and communicate environmental obligations and commitments, including legislative, approval and Client requirements.
- To achieve compliance with regulatory, legislative and SSDA approval requirements.

Project Description and Location

The overarching project description and timeframe milestones are outlined in Part 1 of the Project EHS Management Plan.

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.

Site establishment including office and compound setup, and the construction of access points and internal roadways.

- Demolition of Alex Grimson, Oncology and Pathology buildings.
- Construction of a new Integrated Services Buildings(ISB 2), including basement.
- Refurbishment of numerous areas within the existing Caroline Chisholm and Clinical Services Building of the hospital
- Construction of Campbell St shared Zone
- On Grade Car Park Works,
- External works

Stage 2 Integrated Services Building (ISB 2)

- Construction of a new 6 story Integrated Services Building (ISB) comprising of the following departments;
  - Basement: Workshops, Distribution Centre, Loading Dock, Storerooms and Plant
  - Ground: Education & Conference Centre, Retail, Cancer Clinics and Radiation Oncology
  - Level 1: Clinical Trials, Wellness Centre, Pre-Vocational Offices, Cancer Day Therapy and Educational Spaces
  - Level 2: Staff Health, Education / Library, Women's Ambulant Care, Pead's Consult Zone and MSCL
  - Level 3: Palliative Care IPU and Paediatric IPU
  - Level 4: Antenatal IPU, Education and Postnatal IPU
  - Level 5: Haematology IPU and Oncology IPU
  - Level 6: Plant

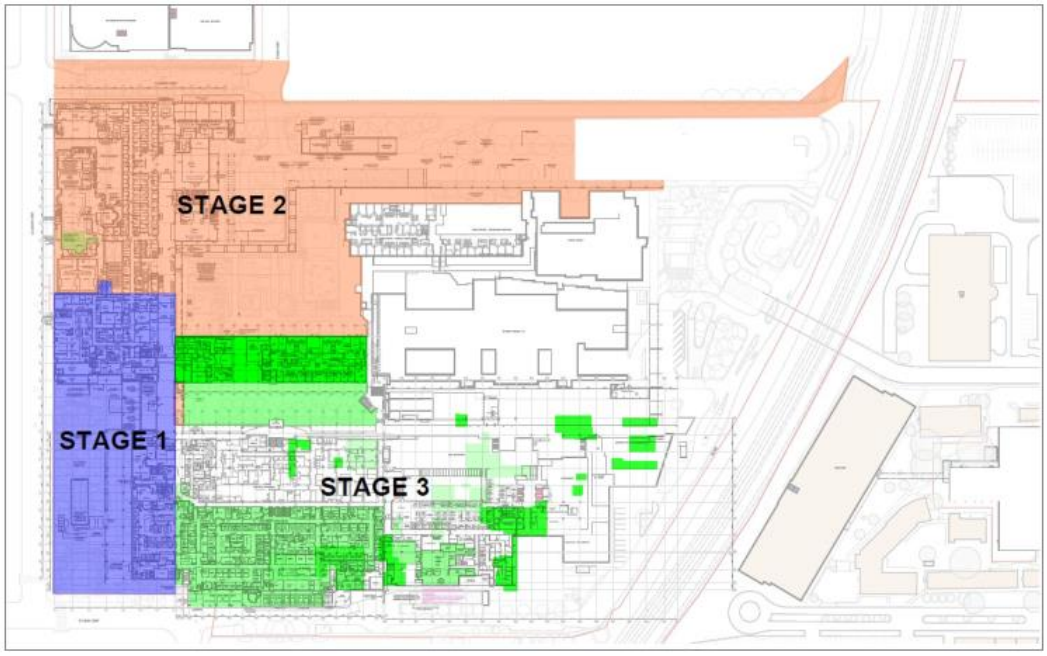
Trees – A total number of three high retention value trees were identified and should be retained and protected at Campbell / Forbes Street.

Heritage – The local street network identified as "Plan of Town" of Liverpool (early town centre street layout-hoddle 1827), Liverpool College (TAFE) site including blocks G & A, chimneystack, fence, gatehouses and archaeological features formally, Liverpool Hospital and Benevolent Asylum.

Hazardous building materials - Asbestos is known within the Alex Grimson building

Noise and Vibration – Existing hospital, Liverpool Girls & Boys High Schools, Tafe NSW Liverpool Campus, Private medical practices (Ingham Institute) and neighbouring residents.

Air Quality – Existing active operations of the remainder of Liverpool Hospital, 20m to existing residential and commercial properties located across Goulburn Street and Campbell Street, 50m to Liverpool Girls and Boys High Schools, 100m to Liverpool TAFE and general adjacent footpaths.



Environmental Control Plan

The Environment Control Plan (ECP) outlines the key environmental features, aspects and environmental management measures required on the project. The ECP can be found in Appendix A. This graphical plan(s) is a key tool for communication and review of project environmental constraints and control measures.
The ECP must be reviewed and updated to reflect significant site changes or project stages, and at a minimum every 6 months during the project EHS sub plan review.

Legislation and Other Requirements

Relevant legislation and other requirements are outlined in Part 2 of the EHS Management Plan, additionally key legislation is detailed in the projects Impacts and Hazards Risk Assessment.

Compliance Obligations Register

All relevant project delivery environmental requirements or commitments listed in the environmental assessment reports, project approvals, permits, licences or contractual conditions must be listed in the Compliance Obligations Register. The Compliance Obligations Register can be found in Appendix B.

Where a project wide obligations register is used to track compliance with environmental approval, contract and other conditions (including allocation of responsibility and compliance status), this may continue to be used in place of the Compliance Obligations Register.

Roles and responsibilities

The key roles with Environment, Health and Safety responsibilities are outlined in the Workplace EHS Management Plan Part 1. A comprehensive Responsibilities, Accountabilities, Consultation, and Information (RACI) chart is in Appendix 1 of the Workplace EHS Management Plan Part 1.

Impacts and Hazard Risk Assessment

Project environmental risks are identified and recorded in the projects Impacts and Hazard Risk Assessment in accordance with the Workplace EHS Management Plan Part 2 Section 7.1.

Incident Management

Lendlease's Incident Management approach is outlined in the Workplace's EHS Management Plan Part 2, Section 9.

The Environmental Impact Rating Matrix will be used to classify and triage the incident.

Incidents that need to be notified to an external authority are described in the External Incident Reporting Guide.

Monitoring and Review

Lendlease's environmental monitoring and assurance activities are completed in accordance with Workplaces EHS Management Plan Part 2, Section 11.

Environmental Aspects

Common Environmental Aspects typically encountered by projects are listed below.

The Environmental Aspects relevant to this project are identified in the Impacts and Hazards Risk Assessment (IHRA). The table below identifies the environmental aspects that require environmental management measures to be implemented by the project, and the reason for that requirement.

Environmental Aspect	Required (Y or N)	Reason
Acid Sulphate Soil	N	Acid sulphate soils have not been identified.
Air Quality	Y	Sensitive receptors and working within a LIVE hospital environment
Asbestos and Hazardous Building Materials	Y	Covered by Asbestos and Hazardous Building Materials Management Sub Plan
Biodiversity and Natural Habitat	Y	Tree protection zones will be in place
Contamination	Y	Management of contamination will be required
Chemical and Fuel Use	Y	Covered by Hazardous Chemicals (Hazardous Products, Materials Substances or Dangerous Goods) Management Sub Plan
Heritage and Archaeology	Y	Existing heritage items have been identified
Noise and Vibration	Y	Sensitive receptors and working within a LIVE hospital environment
Stormwater, Erosion and Sedimentation	Y	Management of ERSED controls will be required
Waste	Y	Mandatory with all EHS MP
Water Resources	N	N/A

Environmental Management Measures

Detailed below are the environmental management activities, mitigation, control, and contingency measures to be implemented on the project.

Air Quality

Dust, smoke, fumes and odours can impact the worksite, neighbouring residences, workplaces, communities and habitats.

NOTE: This section does not address management of activities or impacts associated with 'occupational' (worker) exposure to dust including materials that may contain silica, or aerosols arising from the use of chemicals. Refer to the EHS Management Plan and Workplace Delivery Code for further information.

Risk Exposure

Sensitive receivers with potential to be impacted by workplace air quality on this project include:

- Existing active operations of the remainder of Liverpool Hospital
- 20m to existing residential and commercial properties located across Goulburn Street and Campbell Street
- 50m to Liverpool Girls and Boys High Schools
- 100m to Liverpool TAFE
- General adjacent footpaths.

Workplace activities with potential to cause Air Quality impacts include:

- Ground disturbance, site clearing and grubbing in stage 2 works
- Demolition of existing structures, Alex Grimson building, Oncology and Pathology building
- Refurbishment of numerous areas within the existing Caroline Chisholm and Clinical Services Building of the hospital
- Traffic movements and plant operation.
- Spoil handling and stockpiling.
- Storage and handling of waste materials; and
- Internal works adjacent to clinical areas

Management Controls

Control	When or How Often	Who is Responsible
1.Installing site perimeter dust protection measures on Goulburn St, Elizabeth St and Campbell St as well as monitors near adjacent hospital entry / egress points.	Start of project	LLC

2.Preventing dust generation through minimal ground disturbance and the stabilisation of disturbed areas with either a stabilisation spray on material such as spray grass or geo-spray or by using geofabric laid over stockpiles.	At all times	LLC/Contractor
3.Controlling dust close to its source by using water cannons or other suitable equipment.	At all times	LLC/Contractor
4.Maintaining the site access to prevent dust generation and tracking off-site.	At all times	LLC/Contractor
5.Construction site layout and placement of plant would consider air quality impacts to nearby receivers, pedestrian, commercial receivers, public and road traffic	At all times	LLC/Contractor
6.Long term stockpiles to be covered to prevent dust generation.	When required	LLC/Contractor
7.Minimise traffic on exposed areas – designated haul routes will be installed to ensure ground surfaces are well stabilised to minimise dust and tracking of material.	At all times	LLC/Contractor
8.Cover haul vehicles loads & ensure tail gates are closed when operating on public roads.	At all times	LLC/Contractor
9.Remove dirt from haul vehicles prior to entering public roads.	At all times	LLC/Contractor
10.Remove any spilt material by construction equipment or vehicles on public roads immediately. Street sweepers to be engaged as required to ensure roads are clean.	When required	LLC/Contractor
11.Reprogram dust generating work during periods of high wind or when fugitive dust emissions cannot be controlled.	When required	LLC
12.Regular visual monitoring of dust generation will be undertaken by the site supervisors.	At all times	LLC/Contractor
13.Infection Prevention and Control regular inspections to be completed in refurbishment areas to ensure safe methods of work are in place to minimise dust from construction operations. All information has been prepared in conjunction with the Australian Health Facility Guidelines and PRA Infection Control Plan.	At all times	LLC/Contractor
14.Protection of air handling units and intake from dust during construction works	At all times	LLC
15.Fume reduction strategies during operation of machinery where practical	At all times	LLC

Monitoring and Reporting Record any required Air Quality monitoring/ inspections or reports (if none required enter **NIL** only)	Where	When (or how often)	Who is Responsible	Records
Air monitors set up for stage 2 & 3 works	Stage 2 boundary & carpark	Daily	LLC/PRA	Air monitoring reports
Infection prevention and control checklist	Refurb areas	When required	LLC/Contractor	Infection control checklist
Daily activities where ground disturbance / demolition work is occurring	Stage 2	Daily	LLC	Enablon observations

References:

- National Environment Protection (Ambient Air Quality) Measure (NEPM) 1998
- AS 3580.14:2014 Methods for Sampling and Analysis of Ambient Air – Meteorological monitoring for ambient air quality monitoring applications
- DR 102288 CP Methods for sampling and analysis of ambient air Part 14 - Meteorological monitoring for ambient monitoring applications
- AS 3580.1.1:2007 Methods for Sampling and Analysis of Ambient Air - Guide to Siting Air Monitoring Equipment

Local:

- Liverpool LEP 2008

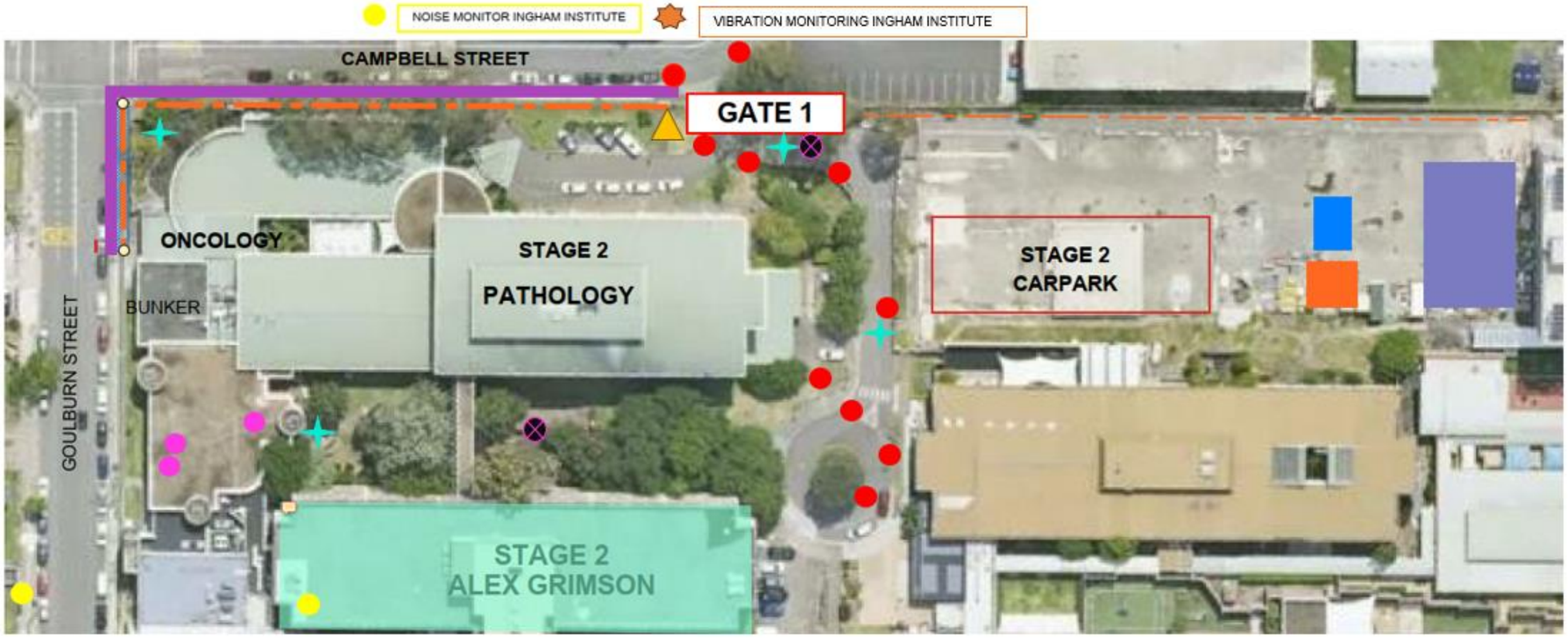
Document Version Control

Date	Document Issue	Purpose and Summary of Amendments	Reviewed by	Approved by
31/01/2024	1	New plan developed to amalgamate the following individual EHS Management Sub Plans: • Acid Sulphate Soils • Air Quality • Conservation and Habitat • Contamination • Heritage and Archaeological Management • Stormwater, Erosion and Sedimentation • Waste Management • Water Resource	James Cannon	Andrew Hereth

Workplace Revision Status				
Date	Project Revision (in numbers)	Purpose and Summary of Amendments	Reviewed by	Approved by
05/08/2021	Rev 2	Plan reviewed as per John Staff Comments	Lilly Cauchi	Daniel Puljic
17/11/2021	Rev 3	Template change	Ian Sheils	Daniel Puljic
09/12/2021	Rev 4	EMD update and general update	Ian Sheils	Daniel Puljic
02/03/22	Rev 5	Review only no changes	Ian Sheils	Daniel Puljic
02/06/22	Rev 6	Update Appendix 1 diagram to show site changes	Dylan Stewart	Daniel Puljic
02/09/2022	Rev 7	Update Appendix 1 diagram to show site changes	Dylan Stewart	Daniel Puljic
02/12/2022	Rev 8	Update Appendix 1 diagram to show site changes	Dylan Stewart	Daniel Puljic
2/05/23	Rev 9	General review & references to LLB removed & LLC inserted, updated EMD & Infection prevention & control checklist	Nigel Rose	Daniel Puljic

7/11/2023	Rev 10	General review & updated EMD	Nigel Rose	Daniel Puljic
22/04/2024	Rev 11	Review only, no changes	Daisy Marks	Daniel Puljic
24/07/2024	Rev 12	Page 13 changes to key contacts	Daisy Marks	Lovro Smoljo
29/10/24	Rev 13	Revert to separate sub plan and reflects stage 2, car park works and includes condition for SSDA 10389 and 10388	Daisy Marks	Daniel Puljic
28/03/25	Rev 14	Updated for Stage 2 Works	Daisy Marks	Sebastian Bartholomeusz

Appendix A – Environmental Control Plan



Icon	Description
	Noise Monitor
	Stormwater Inlet
	Radiation Monitor
	Spill Kit
	HS / DG Storage
	Rubbish Skip
	LL Storage
	B-Class Hoarding
	Sediment Controls
	Air Monitoring
	Dust Monitoring
	Vibration Monitoring

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

Construction Manager	Senior Site Manager	Senior Site Supervisor	Senior EHS Coordinator	Emergency Services
Sebastian Bartholomeusz	Damien Smith	James Hall	Daisy Marks	000
0437 635 696	0437 559 361	0429 801 618	0409 845 126	

Appendix B – Compliance Obligations Register

Project - LHAP

	Source Document			Compliance Obligation		Implementation		Compliance	
Obligation Source	**Title/Plan**	**Reference**	**Revision**	**Condition Reference**	**Condition**	**Where implemented**	**Status**	**Date**	**Evidence**
SSDA	CEMP	10389 / 10388	30 Nov 2020	B11 B12	Provide a copy of the Construction Environmental Management Plan and evidence of submission to Planning Secretary. Provide a statement within the report confirming that the Construction Environmental Management Plan has been made in accordance with the requirements (a)-(f) of this condition.	CEMP Section 1.2			
SSDA	Air Quality	10389 / 10388	30 Nov 2020	C25 C22	The Applicant must take all reasonable steps to minimise dust generated during all works authorised by this consent.	During construction Air Quality Management Sub Plan Management Controls			
SSDA		10389 / 10388	30 Nov 2020	C26 C23	During construction, the Applicant must ensure that: (a) exposed surfaces and stockpiles are suppressed by regular watering. (b) all trucks entering or leaving the site with loads have their loads covered. (c) trucks associated with the development do not track dirt onto the public road network. (d) public roads used by these trucks are kept clean; and (e) land stabilisation works are carried out progressively on site to minimise exposed surfaces	During construction Air Quality Management Sub Plan Management Controls Points 2,6,8,9,10			
SSDA	Biodiversity & Natural Habitat	10389	30 Nov 2020	C23	**Tree Protection** For the duration of the construction works: (a)street trees must not be trimmed or removed unless it forms a part of this development consent or prior written approval from Council is obtained or is required in an emergency to avoid the loss of life or damage to property. (b) all street trees immediately adjacent to the property boundary along Campbell Street, Forbes Street, Goulburn Street and Elizabeth Street, unless approved for removal, must be protected at all times during construction in accordance with Council's tree protection requirements. Any street tree, which is damaged or removed during construction due to an emergency, must be replaced, to the satisfaction of Council. (c) all trees on the site that are not approved for removal must be suitably protected during construction as per the recommendations of the Arboriculture Impact Assessment Tree Protection Specification, prepared by treelQ, dated 5 March 2020: and	During construction Biodiversity & Natural Habitat Management Sub Plan Management Controls Points 1-5			

					(d) if access to the area within any protective barrier is required during the works, it must be carried out under the supervision of qualified arborist. Alternative tree protection measures must be installed, as required. The removal of tree protection measures, following completion of the works, must be carried out under the supervision of a qualified arborist and must avoid both direct mechanical injury to the structure of the tree and soil compaction within the canopy or the limit of the former protective fencing, whichever is the greater.				
		10388 / 10389		B27 B26	**Landscaping** Provide a copy of the landscape plans and a design statement confirming that the plans include the requirements (a)-(d) of this condition the following: (a) provide for the planting of 81 trees; (b) detail the location, species, maturity and height at maturity of plants to be planted on-site; (c) include species (trees, shrubs and groundcovers) indigenous to the local area; and (d) include the planting of trees with a pot container of 75 litres or greater. **B26 – 10389** Prior to the commencement of construction, the Applicant must prepare and submit to the Planning Secretary a revised Landscape Plan to manage the revegetation and landscaping works on-site. The plan must: (a) provide for the planting of 150 trees; (b) detail the location, species, maturity and height at maturity of plants to be planted on-site; (c) include species (trees, shrubs and groundcovers) indigenous to the local area; (d) include the planting of trees with a pot container of 75 litres or greater; and (e) include the provision of street tree planting. Species and spacing of trees to be determined in Consultation with Council.	Prior to construction Biodiversity & Natural Habitat Management Sub Plan			
SSDA	Contamination	10388 / 10389	30 Nov 2020	A19 A20	**Site Contamination** Remediation approved as part of this development consent must be carried out in accordance with the Remediation Action Plan (RAP), dated 29 April 2020, prepared by JK Environments, or any updated RAP, prepared by a Certified Contaminated Land Consultant.	Prior to construction Contamination Management Sub Plan			
SSDA		10388 / 10389	30 Nov 2020	B9 A20	Prior to the commencement of construction, except demolition works, further post-demolition validation investigation outlined in Remediation Action Plan (RAP), dated 30 April 2020, prepared by JK Environments, must be conducted to determine the full nature and extent of the contamination at the project area after demolition works. The post-demolition validation investigation(s) must be undertaken, and the subsequent report(s), must be prepared in accordance with relevant guidelines and prepared by a Certified Contaminated Land Consultant.	Prior to construction Contamination Management Sub Plan			

SSDA		10388 / 10389	30 Nov 2020	B10 A19	The Remediation Action Plan (RAP), dated 30 April 2020, prepared by JKEnvironments, must be updated following results of the post-demolition validation investigation(s) by a Certified Contaminated Land Consultant.	Prior to construction Contamination Management Sub Plan			
SSDA		10388 / 10389	30 Nov 2020	C25 C28	**Imported Soil** The Applicant must: (a) ensure that only VENM, ENM, or other material approved in writing by EPA is brought onto the site. (b) keep accurate records of the volume and type of fill to be used; and (c) make these records available to the Certifier upon request.	During construction Contamination Management Sub Plan Management Controls Points 2,7,8			
SSDA		10388 / 10389	30 Nov 2020	D21 D26	The Applicant must submit a Validation Report for the development. The Validation Report must: (a) be prepared by a Certified Contaminated Land Consultant. (b) be submitted to the Planning Secretary and the Certifier for information within one month after the completion of remediation works; and (c) be prepared in accordance with the RAP and the Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites (OEH,2011).	During construction Contamination Management Sub Plan Management Controls Point 7			
SSDA		10389 / 10388	30 Nov 2020	D27 D22	**Site Audit Statement** **D27.** Prior to the commencement of operation, the Applicant must submit a Site Audit Report and Section A Site Audit Statement for the relevant part of the site prepared by a NSW EPA accredited Site Auditor. The Site Audit Report and Section A Site Audit Statement must verify the relevant part of the site is suitable for the intended land use and be provided for the information of the Planning Secretary and the Certifier.	Prior to commencement Contamination Management Sub Plan			
SSDA		10388 / 10389	30 Nov 2020	D23 D28	**Long Term Environmental Management Plan** Where a Long-Term Environmental Management Plan (LTEMP) is identified as required by the RAP, the plan must: (a) be prepared by a certified Contaminated Land Consultant. (b) be accompanied by a Section B Site Audit Statement prepared by a NSW EPA accredited Site Auditor, that determines the appropriateness of the LTEMP and/or that the land can be made suitable for the intended use if the site is managed in accordance with the LTEMP. (c) be provided to the Planning Secretary within one month of the completion of remediation works, unless otherwise agreed by the Planning Secretary. (d) include, but not be limited to: (I) a description of the nature and location of any contamination remaining on site. (ii) provisions to manage and monitor any remaining contamination, including details of any restrictions placed on the land to prevent development over the containment cell. (iii) a description of the procedures for managing any leachate generated from the containment cell, including any requirements for testing, pumping, treatment and/or disposal. (iv) a description of the procedures for monitoring the integrity of the containment cell; (v) a surface and groundwater monitoring program.	Contamination Management Sub Plan			

					(vi) mechanisms to report results to relevant agencies. (vii) triggers that would indicate if further remediation is required; and (viii) details of any contingency measures that the Applicant is to carry out to address any ongoing contamination.				
		10389 / 10388	30 Nov 2020	E3 E2	**Long Term Environmental Management Plan** Upon completion of remediation works, and where a LTEMP has been prepared, the Applicant must manage the site in accordance with the LTEMP approved under condition D28 and any on-going maintenance of remediation notice issued by EPA under the Contaminated Land Management Act 1997	Contamination Management Sub Plan			
	Heritage & Archaeological	10389 / 10388	30 Nov 2020	B23 B25	**Archaeological Salvage – Historic Archaeology** 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. **B25 10388** Prior to the commencement of construction, except demolition works, 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.	During construction Heritage & Archaeological Management Sub Plan Management Controls Point 7			
		10389 / 10388	30 Nov 2020	B24 B26	**Archaeological Salvage – Historic Archaeology** 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.	Heritage & Archaeological Management Sub Plan Management Controls Point 2			
		10389	30 Nov 2020	C10	**Archaeological Salvage – Historic Archaeology** The historical archaeological program is to be undertaken in accordance with the approved Archaeological Research Design and Excavation Methodology under condition B24 and B26	Heritage & Archaeological Management Sub Plan Management Controls Point 2			
		10389 / 10388	30 Nov 2020	C11 C10	**Archaeological Salvage – Historic Archaeology** 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.	Heritage & Archaeological Management Sub Plan Management Controls Point 8			
		10389 / 10388	30 Nov 2020	C12 C11	**Heritage Interpretation Strategy** 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	Post construction Heritage & Archaeological Management Sub Plan Management Controls Point 8			

					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.				
		10389 / 10388	30 Nov 2020	C32 C29	**Unexpected Finds Protocol – Aboriginal Heritage** 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.	During construction Heritage & Archaeological Management Sub Plan Management Controls Point 6			
		10389 / 10388	30 Nov 2020	C33 C30	**Unexpected Finds Protocol – Historic Heritage** 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.	During construction Heritage & Archaeological Management Sub Plan Management Controls Point 6			
	Noise & Vibration	10389 / 10388	30 Nov 2020	B13 B14	Provide a copy of the Construction Noise and Vibration Management Sub-Plan (CNVMSP) and a statement within the report confirming that the plan addresses the requirements (a)-(g) of this condition.	CEMP Section 1.2			
		10389 / 10388	30 Nov 2020	C4	**Construction Hours** Construction, including the delivery of materials to and from the site, may only be carried out between the following hours: (a) 7am and 6pm, Mondays to Fridays inclusive; and (b) 8am and 1pm, Saturdays. No work may be carried out on Sundays or public holidays.	During construction Noise & Vibration Management Sub Plan Management Controls Point 1 and 5			
		10389 / 10388	30 Nov 2020	C5 C5	**Construction Hours** Construction activities may be undertaken outside of the hours in condition C4 if required: (a)by the Police or a public authority for the delivery of vehicles, plant or materials; or (b) in an emergency to avoid the loss of life, damage to property or to prevent environmental harm; or (c) where the works are inaudible at the nearest sensitive receivers; or (d) for the delivery, set-up and removal of construction cranes, where notice of the crane- related works is provided to the Planning Secretary and affected residents at least seven days prior to the works; or (e) where a variation is approved in advance in writing by the Planning Secretary or his nominee if appropriate justification is provided for the works.	During construction Noise & Vibration Management Sub Plan Management Controls Point 1 and 5			
		10389 / 10388	30 Nov 2020	C6 C6	**Construction Hours** Notification of such construction activities as referenced	During construction			

					in condition C5 must be given to affected residents before undertaking the activities or as soon as is practical afterwards.	Noise & Vibration Management Sub Plan Management Controls Point 1 and 5			
		10389 / 10388	30 Nov 2020	C7 C7	**Construction Hours** Construction activities may be undertaken outside of the hours in condition C4 for concrete finishing works (including the use of a helicopter float), unless directed otherwise by the Planning Secretary, with these activities restricted to the following times (over and above the hours approved in condition C4): (a) Friday: 6pm to 10pm. (b) Saturday: 1pm to 10pm. (c) Sunday: 8am to 10pm. **10388** Concrete finishing works (including the use of a helicopter float) may be undertaken outside of the hours in condition C4, unless directed otherwise by the Planning Secretary, between the following hours: (a) Saturday: 1pm to 3pm.	During construction Noise & Vibration Management Sub Plan Management Controls Point 1 and 5			
		10389	30 Nov 2020	C8	**Construction Hours** The work permitted under condition C7 must only b undertaken where managed by an Out-of-Hours Work Protocol, prepared in consultation with the EPA and Council, and approved by the Planning Secretary. The Protocol must be prepared to identify a schedule for work to be undertaken outside the hours permitted under condition C4 and how they would be managed. The Protocol must provide: (a) a description of the proposed out-of-hours works; (b) predictions of LAeq (15 minute) noise levels at noise sensitive receivers from these works and activities, where noise levels are predicted to be greater than the construction noise management level (NML); and (c) a monitoring plan to validate the noise predictions, based on monitoring at the boundary of representative sensitive receivers during noise generating activities that are representative of the out-of-hours works; (d) identification of proposed mitigation and management measures; (e) consideration of out-of-hours work against the relevant NML and vibration criteria; (f) a process for consultation with the community at each affected location for identifying and implementing mitigation measures where the NML would be exceeded, including respite periods. The measures must take into account the predicted noise levels and the likely frequency and duration of the out-of-hours works that sensitive receivers would be exposed to; and (g) notification arrangements for affected receivers, the EPA and the Planning Secretary for out-of-hours works.	During construction Noise & Vibration Management Sub Plan Management Controls Point 1 and 5			
		10389 / 10388	30 Nov 2020	C9 C8	**Construction Hours** Rock breaking, rock hammering, sheet piling, pile driving and similar activities may only be carried out between the following hours: (a) 9am to 12pm, Monday to Friday;	Noise & Vibration Management Sub Plan Management Controls			

					(b) 2pm to 5pm Monday to Friday; and (c) 9am to 12pm, Saturday.	Point 8			
		10389 / 10388	30 Nov 2020	C17 C16	**Construction Noise Limits** The development must be constructed to achieve the construction noise management levels detailed in the Interim Construction Noise Guideline (DECC, 2009). All feasible and reasonable noise mitigation measures must be implemented and any activities that could exceed the construction noise management levels must be identified and managed in accordance with the management and mitigation measures identified in the approved Construction Noise and Vibration Management Plan.				
		10389 / 10388	30 Nov 2020	C18 C17	**Construction Noise Limits** The Applicant must ensure construction vehicles (including concrete agitator trucks) do not arrive at the site or surrounding residential precincts outside of the construction hours of work outlined under condition C4 except where permitted by condition C7.	Noise & Vibration Management Sub Plan Management Controls Point 1 and 5			
		10389 / 10388	30 Nov 2020	C19 C18	**Construction Noise Limits** The Applicant must implement, where practicable and without compromising the safety of construction staff or members of the public, the use of 'quackers' to ensure noise impacts on surrounding noise sensitive receivers are minimised.	Noise & Vibration Management Sub Plan Management Controls Point 9			
		10389 / 10388	30 Nov 2020	C20 C19	**Vibration Criteria** Vibration caused by construction at any residence or structure outside the site must be limited to: (a) for structural damage, the latest version of DIN 4150-3 (1992-02) Structural vibration - Effects of vibration on structures (German Institute for Standardisation, 1999); and (b) for human exposure, the acceptable vibration values set out in the Environmental Noise Management Assessing Vibration: a technical guideline (DEC 2006) (as may be updated or replaced from time to time).				
		10389 / 10388	30 Nov 2020	C21 C20	**Vibration Criteria** Vibratory compactors must not be used closer than 30 metres from residential buildings unless vibration monitoring confirms compliance with the vibration criteria specified in condition C20.	Noise & Vibration Management Sub Plan Management Controls Point 10			
		10389 / 10388	30 Nov 2020	C22 C21	**Vibration Criteria** The limits in conditions C20 and C21 apply unless otherwise outlined in a Construction Noise and Vibration Management Plan, approved as part of the CEMP required by condition B13 of this consent.				
	Stormwater, Erosion and Sediment	10389 / 10388	30 Nov 2020	B16 B17	**Soil and Water** Prior to the commencement of construction, the Applicant must install erosion and sediment controls on the site to manage wet weather events.	Stormwater, Erosion and Sediment Management Sub Plan Management Controls			
		10389 / 10388	30 Nov 2020	B17 B18	**Soil and Water** Prior to the commencement of construction, erosion and sediment controls must be installed and maintained, as a minimum, in accordance with the publication Managing Urban Stormwater: Soils & Construction (4th edition, Landcom 2004) commonly referred to as the 'Blue Book'	Stormwater, Erosion and Sediment Management Sub Plan Management Controls			

		10389 / 10388	30 Nov 2020	C27 C24	**Erosion and Sediment Control** All erosion and sediment control measures must be effectively implemented and maintained at or above design capacity for the duration of the construction works and until such time as all ground disturbed by the works has been stabilised and rehabilitated so that it no longer acts as a source of sediment. Erosion and sediment control techniques, as a minimum, are to be in accordance with the publication Managing Urban Stormwater: Soils & Construction (4th edition, Landcom, 2004) commonly referred to as the 'Blue Book'.	Stormwater, Erosion and Sediment Management Sub Plan Management Controls Point 4 and 5			
		10389 / 10388	30 Nov 2020	C29 C26	**Disposal of Seepage and Stormwater** Adequate provisions must be made to collect and discharge stormwater drainage during construction of the building to the satisfaction of the principal Certifier. The prior written approval of Council must be obtained to connect or discharge site stormwater to Council's stormwater drainage system or street gutter	Stormwater, Erosion and Sediment Management Sub Plan Management Controls Point 8			
		10389 / 10388	30 Nov 2020	C31 C28	**Stormwater Management System** Within three months of the commencement of construction, the Applicant must design an operational stormwater management system for the development and submit it to the satisfaction of the Certifier. The system must: (a) be designed by a suitably qualified and experienced person(s). (b) be generally in accordance with the conceptual design in the EIS. (c) be in accordance with applicable Australian Standards; and (d) ensure that the system capacity has been designed in accordance with Australian Rainfall and Runoff (Engineers Australia, 2016) and Managing Urban Stormwater: Council Handbook (EPA, 1997) guidelines.	Stormwater, Erosion and Sediment Management Sub Plan Management Controls			
		10389 / 10388	30 Nov 2020	B17 B18	Provide confirmation of the installment erosion and sediment controls on the site to manage wet weather events. Provide a design statement confirming erosion and sediment controls will be installed and maintained, as a minimum, in accordance with the publication Managing Urban Stormwater: Soils & Construction (4th edition, Landcom 2004) commonly referred to as the 'Blue Book'.				
		10389	30 Nov 2020	E16	**Discharge Limits** The development must comply with section 120 of the POEO Act, which prohibits the pollution of waters.	Management Controls Point 8			
	Waste Management	10389 / 10388	30 Nov 2020	B14 B15	The Construction Waste Management Sub-Plan (CWMSP) must address, but not be limited to, the following: (a) detail the quantities of each waste type generated during construction and the proposed reuse, recycling, and disposal locations; (b) removal of hazardous materials, particularly the method of containment and control of emission of fibres to the air, and disposal at an approved waste disposal facility in accordance with the requirements of the relevant legislation, codes,	Waste Management Sub Plan Management Controls Point 1			

					standards, and guidelines, prior to the commencement of construction.				
		10389 / 10388	30 Nov 2020	C34 C31	**Waste Storage and Processing** All waste generated during construction must be always secured and maintained within designated waste storage areas and must not leave the site onto neighbouring public or private properties.	Waste Management Sub Plan Management Controls Point 8			
		10389 / 10388	30 Nov 2020	C35 C32	**Waste Storage and Processing** All waste generated during construction must be assessed, classified, and managed in accordance with the Waste Classification Guidelines Part 1: Classifying Waste (EPA, 2014).	During construction Waste Management Sub Plan Management Controls Point 8			
		10389 / 10388	30 Nov 2020	C36 C33	**Waste Storage and Processing** The Applicant must ensure that concrete waste and rinse water are not disposed of on the site and are prevented from entering any natural or artificial watercourse.	During construction Waste Management Sub Plan Management Controls Point 9			
		10389 / 10388	30 Nov 2020	C37 C34	**Waste Storage and Processing** The Applicant must record the quantities of each waste type generated during construction and the proposed reuse, recycling, and disposal locations for the duration of construction.	During construction Waste Management Sub Plan Management Controls Point 4			
		10389 / 10388	30 Nov 2020	C38 C35	**Water Storage and Processing** The Applicant must ensure that the removal of hazardous materials, particularly the method of containment and control of emission of fibres to the air, and disposal at an approved waste disposal facility is in accordance with the requirements of the relevant legislation, codes, standards, and guidelines.	Waste Management Sub Plan Management Controls Point 1			