LENDLEASE BUILDING PTY LTD | 97 000 098 162

TWEED VALLEY HOSPITAL – STAGE 2

MANAGEMENT PLAN – ASBESTOS & HAZARDOUS BUILDING MATERIALS

27/07/2020

Sub Plan Revision Status				
Date	Revision (in numbers)	Purpose and Summary of Amendments	Reviewed by	Approved by
30/03/17	2	Revision including LLB GMR and legislative amendments.	Tracey Wallbridge	Brian Falls
12/02/19	3	Revision including project specific information	Darren Chow	Darren Chow
1/5/2019	4	Updated to Satisfy SSD Requirements	Monique Windley	G. Barrow
16/06/2019	5	Final SSD Stage 1 Issue	Monique Windley	G. Barrow
24/9/2019	6	Reviewed no changes	Mick Zwolsman	G Barrow
27/07/2020	7	Update for SSD2 Conditions	Monique Windley	

*Note that all printed paper/hard copies of this document remain uncontrolled. The controlled copy of this document is found either in the project collaboration tool, within the Project Management Plan section, or other project specific database/server approved by the Regional EHS Manager / Head of EHS Integrated Project.

1. OVERVIEW

The Tweed Valley Hospital Project broadly consists of:

- Construction of a new Level 5 major regional referral hospital to provide the health services required to meet the needs of the growing population of the Tweed-Byron region (in conjunction with the other hospitals and community health facilities across the region);
- Delivery of the supporting infrastructure required for the Tweed Valley Hospital, including green space and other amenities, roads and car parking, external road upgrades and connections, utilities connections, and other supporting infrastructure.

1.1.1 Stage 2 Hospital Main Works and Operation

The Stage 2 SSD component seeks consent for the Main Works and Operation of the Tweed Valley Hospital, including:

- **Construction of Main Hospital Building**
  - Main entry and retail area
  - Administration
  - Community health
  - In-Patient units
  - Outpatient clinics and day only units
  - Child and Adolescent Services
  - Intensive Care Unit
  - Mental Health Unit
  - Maternity Unit and Birthing Suites
  - Renal Dialysis
  - Pathology
  - Pharmacy
  - Radiation Oncology as part of integrated Cancer Care
  - Emergency Department
  - Perioperative Services
  - Interventional Cardiology
  - Medical Imaging
  - Mortuary
  - Education, Training, Research
  - Back of House services
  - Rooftop Helipad
- **Construction of Support Buildings, referred to as the 'Health Hub', containing:**
  - Oral Health
  - Community Health
  - Aboriginal Health
  - Administration
  - Education, Training and Research
- **Internal Roads and carparking, including multi-deck parking for staff, patients and visitors;**
- **Construction of a temporary building for the 'Tweed Valley Skills Centre'**
- **External road infrastructure upgrades and main site access**
- **Environmental and wetland rehabilitation, including rehabilitation of existing farm dam as outlined in the Biodiversity Development Assessment Report (BDAR) prepared for the Concept Proposal and Stage 1 works**
- **Site landscaping**
- **Signage**
- **Utility and service works**

The works outlined above comprise five key components, which are subject to various funding allocations and may be delivered independently to each other. Stage 2 has therefore been defined in the following sub-stages:

Stage 2A – Main Hospital Building complete with supporting roads, services infrastructure and landscaping
Stage 2B – Main Hospital Building incremental expansion areas
Stage 2C – Health Hub
Stage 2D – Tweed Valley Skills Centre
Stage 2E – Multi-deck car park.

Refer to the Staging Report for details of staging.

2. SSD REQUIRMENTS

State Significant Development Conditions	
B17b. The Construction Waste Management Sub-Plan (CWMSP) must address, but not be limited to, the following:	
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, standards and guidelines, prior to the commencement of construction.	Refer to Section 4: Implementation Of The Sub Plan

3. SCOPE OF PROJECT AND SUB PLAN

Project Details	
Scope of the Sub Plan	This Asbestos and Hazardous Building Material Management Sub Plan details control measures for works where asbestos and/or hazardous building materials are present or identified during construction. It defines mitigation measures to be implemented during relevant construction activities, a monitoring program that enables assessment of the impacts of construction activities on potentially affected areas, and contingency measures that may be implemented if exceedances are measured. 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 (LLB) EHS management system.
Objectives of the Sub Plan	• To provide a process for the identification of asbestos or hazardous building materials in site buildings or structures. • To ensure the proper removal of any asbestos or hazardous building materials identified in site buildings or structures. • To ensure that asbestos and hazardous building materials are properly stored, transported and disposed of to an approved, licensed waste facility. • To prevent any impact to air quality or site work areas and adjoining properties via inappropriate handling, removal or disposal of asbestos or other hazardous building materials.
Scope of Works	This Sub Plan has been prepared based on consideration of the following scope of works: • Site establishment including in-ground works; • Clearing of vegetation; • Excavation and stockpiling of material for reuse; • Installation of in-ground infrastructure services; and • Piling.
Key Issues and Risks	Asbestos is commonly used as an acoustic insulator and can be found in brake pads (i.e. lifts), thermal insulation (i.e. pipes and cables), fire proofing (i.e. steel beams) and in building materials such as ceiling tiles, wall panels, pipes, floor tiles, linoleum and mastic. Asbestos is made up of microscopic bundles of fibres that may become airborne when distributed. These fibres may become inhaled into the lungs with significant potential risks to human health.

	Other hazardous building products that may be encountered on site include fluorescent light fittings with capacitors containing PCBs and building materials coated with lead-based paints. These materials pose potential risks to the environment and human health if removed, handled and/or disposed of inappropriately. The works will require the disturbance, removal, handling and disposal of material that contain: • Asbestos; and • Lead paint. The activities expected to have the greatest potential to impact on the local environment, site workers and community are: ● Site clearing and establishment; ● Excavation and installation of in-ground services; ● Temporary storage of materials; ● Loading of materials and transport; ● Waste disposal. The impacts of these works may include: ● Direct exposure of workers and the community to hazardous materials; ● Dust migration off site affecting project neighbours; ● Runoff of sediment containing contaminants; ● Pollution or contamination of land, air, water on and/or off-site due to poor handling and/or storage; ● Inappropriate disposal of materials resulting in contamination or pollution. The implementation of the control measures identified in the EHS Plan and Asbestos and Hazardous Building Material Management Sub Plan are intended to prevent or mitigate these impacts.
Legislation, Approvals and Guidelines	**Federal/National:** Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 Environment Protection and Biodiversity Conservation Act 1999 National Greenhouse and Energy Reporting Act 2007 Environment Operations (Waste) Regulation 2014 – Part 7 Model Code of Practice: How to Safely Remove Asbestos (Safe Work Australia April 16)

	AS 4964-2004: Method for the qualitative identification of asbestos in bulk samples NOHSC Publication: Guidance Note for the Assessment of Health Risks arising from the use of Hazardous Substances in the Workplace (1994) NOHSC Publication: Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres 2nd Edition [NOHSC:3003(2005) NOHSC Publication: Guidance Note on the Membrane Filter Method for the Estimation of Airborne Synthetic Mineral Fibres [NOHSC:3006 (1989) NOHSC Publication: List of Designated Hazardous Substances [NOHSC:10005 (1999) Globally Harmonised System of Classification and Labelling of Chemicals (GHS) **State:** Relevant State Government Safety Codes including: How to Safely remove asbestos: Code of Practice. Workplace Health and Safety Queensland and Safe work SA (2011) How to Manage and Control Asbestos in the Workplace: Code of Practice 2011 **Local:** Tweed Local Environmental Plan 2014 [NSW] **Lendlease Requirements:** • GMR: 4.13 Degradation or Pollution of the Environment • GMR 4.10 Occupational Health Exposure • GMR 4.11 Public Health Exposure • GMR: 4.15 Uncontrolled Release of Stored Energy (non-electrical)) • Lendlease Building Workplace Delivery Code (WDC)
Summary of Site Controls	Works must be planned and implemented in accordance with the Lendlease GMRs, the Project EHS Plan, this Sub Plan and the Lendlease Building WDC. These documents detail Lendlease's approach and commitment to pro-active and responsible site management. Site specific controls, monitoring, reporting and performance measurements have been identified in this Sub Plan to protect the environment, workers and community. These include but are not limited to: • Preparing an Asbestos and Hazardous Building Materials Environmental Management Diagram (EMD) prior to any site activities commencing including clearing and demolition; • Compiling a Hazardous Building Materials Register (including SDSs) to document the location and type of hazardous materials present (in ground or buildings); and

	• Implementing the following unexpected find protocol if suspected toxic or hazardous materials are discovered/exposed during demolition/construction activities in an area of the site believed to be free of hazardous materials. Asbestos and hazardous building material handling and disposal requirements must be included in relevant specifications, contract agreements, quality assurance documents, and subcontractor work method statements. Site inspections, monitoring and reporting will be undertaken by Lendlease and subcontractors as detailed in the EHS Plan and the following implementation table. **Note: No asbestos waste is to be re-used or recycled on site.** **Unexpected Find Protocol** 1. Cease work and evacuate the area of work immediately. 2. Contact a LL representative (EHS Manager/Coordinator, General Foreman, Construction Manager). 3. LL to contact TSA and HI to inform them of the potential find. 4. Erect barricades to isolate the immediate areas providing 10m between the suspect material and the erected barrier if possible. 5. Notify the appropriate regulatory authorities as soon as possible if applicable. 6. Prevent access to the barricaded area unless express permission has been given by the qualified environmental specialist. A clearance certificate or approval should be given in writing prior to entry. 7. Undertake sampling of the suspect material (to be carried out by an appropriately qualified environmental specialist, usually a consultant) as advised by the LL Construction Manager. 8. Determine, in consultation with the nominated environmental specialist and in liaison with LL senior site personnel and/or relevant authorities, if further remedial actions are necessary based on the sample test results. Identify appropriate treatment/handling or disposal options and procedures. 9. Obtain all required permits to carry out remedial work prior to the commencement of any new works. The nominated environmental specialist must provide written clearance approval for entry. 10. Remove the barricade to allow work activities to resume under the direction of the LL Construction Manager.
Reporting Transportation of Asbestos Waste	**Reporting on transportation of asbestos waste solely within New South Wales (refer to Protection of the Environment Operations (Waste) Regulation 2014)** 1. Identify whether transportation is required to be notified

	2. Provide required information to EPA prior to transportation 3. Consignment Codes issued by EPA are issued upon delivery. 4. Provide required information to EPA after delivery

4. IMPLEMENTATION OF THE SUB PLAN

Description	Timing	Methodology	Responsibility	Monitoring and Reporting	Performance Measurement
Planning and Identification					
Prepare a Hazardous Building Material Register.	Prior to demolition works commencing	Establish a register based on survey. Communicate details to workers and subcontractors. Address in IHRA.	CM/SM	Details included in subcontractor WMS. Inspections prior, during and after material removal.	Register current.
Include information in the Site Induction about the risks and potential impacts of asbestos and hazardous building material handling.	Prior to works commencing and ongoing	Revise Lendlease standard induction package to include site specific information. Deliver induction material.	CM SM	WMS prepared by subcontractors to address environmental and safety requirements.	Site induction delivered to all workers on site.
Prepare an Asbestos and Hazardous Building Materials Environmental Management Diagram (EMD) showing the location of affected infrastructure, buildings and site areas.	At site establishment and prior to works commencing	Review Environmental Management Diagram (EMD Appendix 1). Prepare diagram showing details of affected structures/ areas.	CM SM	EMD reviewed. Diagram prepared prior to works commencing. Diagram updated every 6 weeks.	Diagram prepared containing all relevant details and communicated. Diagram updated to reflect changes in site conditions. Controls implemented in accordance with the EMD.
Install barriers, fencing, tags, signage etc, around/on affected structures/areas as per the EMD.	Prior to works commencing	Undertake a site inspection to verify the correct location of controls.	SM	Daily surveillance to assess effectiveness and condition.	Controls modified or new controls installed as required.

		Install controls in accordance with EMD, design/engineer's documentation.		Weekly/monthly inspection checklist.	
Develop health and environmental monitoring programs (as required).	Prior to works commencing	Engage a specialist consultant to develop and advise on monitoring requirements.	CM	Daily surveillance. Real-time assessment of results.	Monitoring implemented as required.
Identify handling, loading and temporary storage areas.	Prior to works commencing. Maintain at all times	Retain existing hard surfaces where possible. Establish secure storage areas with appropriate signage, dust and runoff controls. Construct stable site entry/exit points and roadways using appropriate materials.	SM Foreman	Daily surveillance and maintenance. Weekly/monthly inspection checklist.	No tracking onto public roads or dust. Tracking of all waste materials removed from site. No runoff or loss of materials.
Excavation of Contaminated Material (mechanical means)					
Engage a licensed contractor to undertake and supervise the works.	At all times	Document removal procedures in contractor SWMS (i.e. sprays to stabilise paints /dust). Implement dust monitoring (as required).	SM Foreman	Daily inspections	WMS followed. No non-compliance detected by the asbestos licensed removal contractor.
Ensure: • Excavator (plant) has an enclosed cabin for the operator; and • Operator remains inside the cab for the duration of works with air conditioning running.	At all times	Document removal procedure documented in contractor SWMS (i.e. sprays to stabilise paints /dust). Implement dust monitoring (as required).	SM Foreman	Daily inspections	WMS followed.
Implement dust, erosion and sediment controls prior to works commencing (particularly on highly erodible soils).	At all times	Ensure a reliable source of water is available for dust suppression.	SM Foreman	Daily inspections	WMS followed.

		Implement erosion and sediment controls to capture potentially contaminated sediment. Document removal procedures in contractor SWMS. Implement dust monitoring (as required).			
Prepare and implement specific procedures for the transport of excavated, asbestos impacted soil to approved locations.	At all times	Load asbestos impacted soil into a truck or bin lined with 200µm thick polythene. Truck/bin to be securely covered and sealed. Dispose of material in accordance with authority requirements. Keep dockets/tracking details.	SM Foreman	Daily inspections	SWMS followed. Waste tracking of trucks/bins leaving site and dockets from licensed landfill.
Excavation of Contaminated Material (non-mechanical means)					
Engage a licensed contractor to undertake and supervise the works.	At all times	Document removal procedures in contractor SWMS (i.e. sprays to stabilise paints /dust). Implement dust monitoring (as required).	SM Foreman	Daily inspections	SWMS followed. No non-compliance detected by the asbestos licensed removal contractor.
Establish defined 'contamination zones' where asbestos material is located on exposed or excavated surfaces.	At all times	Remove asbestos debris using a combination of 'emu picking' and raking and place material into a 200µm thick polythene bag until it is no more than 50% full. When at 50% capacity, the bag should be double bagged and sealed air-tight with industrial tape.	SM Foreman	Daily inspections	SWMS followed. No non-compliance detected by the asbestos licensed removal contractor.
Obtain a clearance certificate.	As required	Engage an occupational hygienist to inspect the surfaces of the excavated area including ground surfaces to confirm there	SM Occupational hygienist	Inspections to all areas as required	Issue of a clearance certificate following a satisfactory inspection result.

		is no visually identifiable asbestos remaining on site.			
Backfill excavations in asbestos impacted soils (including new service trenches) with certified clean fill.	At all times as required	Install a geo-textile fabric layer along the walls and base of the trench as well as over ground surfaces to provide delineation between the clean fill and asbestos impacted soils. Use certified clean fill such as crushed concrete or a pebble layer at the base of the trench for the new services to sit on. Use clean, validated fill material to backfill and encapsulate the trench. Engage the occupational hygienist to inspect surfaces of the backfilled trench including the ground surface, to confirm the encapsulation of the asbestos impacted soils with geo-fabric.	SM	Inspections to all areas as required	SWMS followed. Certified documentation for clean fill obtained.
Temporary Storage, Transport and Disposal					
Undertake sampling and analysis of the soil/material to determine its waste classification.	At all times	Engage a specialised environmental consultant to undertake sampling and provide a waste classification report. Identify a suitably licensed facility to accept the waste.	CM SM	Waste classification report.	Acceptance by licensed waste facility
Provide dedicated and clearly identified bins for the temporary on-site storage of asbestos, PCBs, lead-based paints or other hazardous building materials – where storage is required.	At all times	Provide dedicated and clearly marked/delineated waste bins. Bins must be lined and sealed prior to removal for disposal.	SM	Daily inspections	Waste correctly stored in marked bins. No cross contamination of wastes.
Track details for all materials excavated from the site and transported for disposal (i.e. cradle to grave).	At all times	Document detailed and specific procedures for the transport and disposal of asbestos, PCBs, lead based paint and other hazardous materials.	CM SM EHS	WMS prepared by subcontractor Daily inspections.	No non-conformances from inspections. All transport vehicles covered and showing

		Identify suitable licensed waste transporters and facilities. Transport asbestos impacted fill and/or hazardous building materials off-site in leak proof, covered vehicles and dispose of at a licensed facility (based on waste classification). Record the following for trucks leaving site: • Origin of material; • Material type; • Approximate volume; and • Truck registration number.		Tracking register of trucks or bins leaving site. Periodic inspections of transport vehicles/containers. Periodic inspection of waste disposal documentation.	appropriate signage and permits. No rejection of loads from licensed facility.
Dispose of all asbestos affected/ exposed materials to a licensed facility.	At all times	Bag, double wrap and seal bags of polythene, coveralls, geo-fabric and rags used during the operation for disposal as asbestos contaminated waste. Transport affected/hazardous materials to an appropriately licensed waste facility. Bonded Asbestos to be transported securely packaged Friable Asbestos to be transported in sealed container. Contain dust during unloading/disposal of asbestos. Adequately covering disposed asbestos waste as per Environment Operations (Waste) Regulation 2014.	SM	Tracking of materials and/or bins leaving site. Check license/approval of facility to receive waste.	No non-conformances from inspections. No rejection of loads from licensed facility. Landfill waste dockets correspond to removed waste volumes/types.
Environmental Monitoring (air) and Clearance					
Engage an occupational hygienist (OH) to implement monitoring and undertake inspections of the work.	Prior to work commencing.	Request that the OH carry out a full visual inspection of the work area prior to the commencement of asbestos/ hazardous	CM SM OH	Daily inspection and checks during works to check monitoring	Monitoring results.

	Ongoing – as determined by the OH At completion of removal work	materials removal works to ensure containment measures are satisfactory. Request that the OH carry out perimeter, personal (including excavator operator) and clearance air monitoring* and inspections. (*continuous asbestos fibre monitoring must be conducted by a NATA accredited OH) Request that the OH carry out a full inspection of the work area and transit route at the completion of hazardous material removal works. If removal works are not to the satisfaction of the OH, removal contractors will be required to re-enter the work area to rectify any issues arising from the inspection.		equipment and identify dust. Continuous fibre monitoring.	Certificates and inspection reports provided by OH. Satisfactory clearance inspection.
Personal and Plant Decontamination					
Establish a process and personal decontamination facilities within the asbestos affected area in a location where re-contamination cannot occur.	At all times	Ensure personal decontamination occurs each time workers leave an asbestos affected work area AND at the completion of the asbestos removal work. When leaving the work area all site personnel must make their way to the nominated decontamination area, remove their coveralls and clean their masks and boots using the wet rags. Respirator must remain on during decontamination and must only be removed on completion of decontamination. All equipment and waste removed from the asbestos affected work area must be decontaminated using wet rags.	SM	As detailed in the WMS prepared by sub-contractor. Daily inspections of decontamination area, process and controls.	Hygienist inspection reports and clearance.

		At the completion of works, all asbestos related materials including polythene, coveralls, geo-fabric and rags must be double wrapped and sealed for disposal as asbestos contaminated waste.			
Establish a process and an area for the decontamination of plant used in the removal of asbestos or other hazardous materials.	At competition of works or if plant moved within or off site.	Park excavators/trucks etc within a designated washing area after works. Remove all soil from the tracks, body and bucket as far as reasonably practicable. Collect, remove and deposit soil and sediment from the cleaning process in a truck parked outside of the asbestos affected area. Classify and dispose of waste (including soil/sediment) in accordance with relevant State Government requirements.	SM	As detailed in the WMS prepared by sub-contractor. Daily inspections of the decontamination area, process and controls.	Landfill waste dockets provided. Landfill dockets match waste volumes/types removed.