

LIVERPOOL HEATH & ACADEMIC PRECINCT

OCCUPATIONAL HEALTH AND HYGIENE MANAGEMENT SUB PLAN

25/05/2023 | Issue No: 2.0



Document Issue Status				
Date	Document Issue (in numbers)	Purpose and Summary of Amendments	Reviewed by	Approved by
11/05/2021	1.0	New Plan Issued for Use	Brooke Brittain	Ross Trethewy
25/05/2023	2.0	Plan updated to reflect new requirements	Naomi Maughan	Brooke Brittain

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Project Revision Status				
Date	Project Revision (in numbers)	Purpose and Summary of Amendments	Reviewed by	Approved by
07/07/21	1	LHAP Information	Daisy Badel	Michael Niedzwiecki
17/11/2021	2	Review only, no changes	Ian Sheils	Daniel Puljic
08/02/2022	3	Review only, no changes	Ian Sheils	Daniel Puljic
05/05/2022	4	Review only, no changes	Dylan Stewart	Daniel Puljic
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02/09/2022	6	Review only , no changes	Dylan Stewart	Daniel Puljic
02/12/2022	7	Review only, no changes	Dylan Stewart	Daniel Puljic
05/05/2023	8	Changed Lendlease Building to Lendlease Construction	Nigel Rose	Daniel Puljic
7/11/2023	9	New document issue	Nigel Rose	Daniel Puljic

22/4/24	10	Review only, no changes	Daisy Marks	Daniel Puljic
24/07/24	11	Review only, no changes	Daisy Marks	Lovro Smoljo

1. SCOPE OF PROJECT AND SUB PLAN

Project Details	
Scope of the Sub Plan	<p>This Occupational Health and Hygiene (OHH) Management Sub Plan forms an integral part of the overall Projects EHS Plan for projects that have risk of exposure to hazardous chemicals and/or airborne contaminants that can not be eliminated.</p> <p>This Plan defines the OHH requirements that must be implemented throughout the construction phase of the Project to ensure that the risks to Workers' health is identified, assessed, evaluated and controlled.</p>
Scope of Works	<p>This Sub Plan has been prepared based on consideration of the following scope of works:</p> <ul style="list-style-type: none"> • Site establishment including in-ground works; • Clearing of vegetation & removal, topsoil stripping, • Demolition of Thomas & Rachel Moore education centre, Alex Grimson, Oncology and Pathology buildings • Excavation and stockpiling of approximately 10,000m³ of material and backfilling of approximately 4,00m³ of clean fill • Installation of 325 Continuous Flight Augering (CFA) type piles • Construction of new Integrated Services Building (ISB) Stage 1
Key Hazards and Risks	<p>Exposure to hazards associated products, substances and materials used in the construction that may have potential health effects must be identified, assessed, controlled and reviewed. For each product, substances and materials, information on its use, physical properties, routes of exposure and potential occupational health effects must be determined.</p> <ul style="list-style-type: none"> • Respirable Crystalline Silica (α-Quartz) • Respirable Dust • Inhalable Dust (including wood dust) • Welding / Metal fumes • Exhaust Emissions (e.g. carbon monoxide (CO), carbon dioxide (CO₂), nitrous oxides (NO_x) • Diesel Particulate Matter (DPM) • Volatile Organic Compounds (VOCs) (e.g. benzene, toluene, xylene) • Isocyanates • Formaldehyde • Methyl ethyl Ketone • Wet concrete and curing agents • Occupational Noise • Hand-Arm Vibration (HAV) • Whole-Body Vibration (WBV) • Hazardous Manual Tasks • Thermal Extremes • Biological agents - <p>The implementation of the control measures identified in the Project EHS Management Plan and the Occupational Health and Hygiene Management Sub Plan are intended to prevent or mitigate the above identified hazards and related health impacts.</p>
Supporting Lendlease Document	<p>Global Minimum Requirements</p> <ul style="list-style-type: none"> • 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)) <p>Workplace Delivery Code: Occupational Health and Hygiene</p> <p>Lendlease Construction: Exposure Monitoring and Health Surveillance Procedure</p>

Legislation,
Regulations
and Code of
Practice

Federal/National:

- WHS/OHS/OSH legislation in each legal jurisdiction
- Workplace Exposure Standards for Airborne Contaminants (Safework Australia, 2020);
- Guidelines on the interpretation of workplace exposure standards for airborne contaminants (Safework Australia, 2013);
- Health Monitoring for Exposure to Hazardous Chemicals: Guide for persons conducting a business or undertaking (Safe Work Australia, 2020);
- AS/NZS 1715-2009 Selection, use and maintenance of respiratory protection
- AS/2985-2009 Workplace atmospheres method for sampling and gravimetric determination of respirable dust

State:

Harmonised WHS Jurisdictions

- Managing the risks of hazardous chemicals in the workplace
- Health Monitoring for Exposure to Hazardous Chemicals - Guide for persons conducting a business or undertaking
- Health Monitoring for Exposure to Hazardous Chemicals - Guide for workers
- Managing the risks of respirable crystalline silica from engineered stone in the workplace (NSW, WA, SA)

2. IMPLEMENTATION OF THE SUB PLAN

Action	Forms to be completed	Responsibility
Prior to works commencing		
Where Asbestos has been identified onsite, an asbestos specialist must be engaged and asbestos management plan developed.	Consultant report	CM
Review the National Health Risk Assessment for Silica and customise to the site and identify any workplace activities that have not been assessed	National Health Risk Assessment Template	CM
Where required, organise occupational hygienist to complete review of any workplace activities that have not been assessed for Silica	Occupational Hygienist assessment	CM
Subcontractor must provide evidence of completed training relevant to the hazardous chemical / airborne contaminate that they will be working with eg silica/ asbestos	Works to Proceed / Induction	CM
Include information in the Site Induction about the risks and potential impacts of hazardous chemicals and other airborne contaminants hazardous to human health specific to the site	Site Induction Prior to commencement	CM SM
Subcontractors to provide task specific SWMS that include controls that meet GMRs and regulations/CoP	SWMS / SWMS review	Subcontractors
Develop site specific SWMS for all activities undertaken by CW where there may be exposure to Occupational Health Hazards	SWMS template	CM/SM/FM
Review all SWMS for occupational health hazards to ensure that they meet GMR and legislative requirements	SWMS Review Checklist	CM/SM/FM
Where there is a potential unknown occupational hazard exposure, ie ground contamination, hazardous materials, or recommended controls can not be implemented engage an Occupational Hygienist for assessment	Occupational Hygienist assessment	CM
Workers using Respiratory Protective Equipment are to be fit tested in accordance with Australian Standards. Subcontractors must show evidence of fit test card or certificate current within last 12 months	Works to Proceed / Induction Fit test card or certificate	CM / Subcontractors
During Works		
Undertake health monitoring for workers' exposed to hazardous chemicals or other respirable airborne contaminants in accordance with regulations, code of practice, or advice from hygienist.	As required	CM SM
Undertake high risk work observations to ensure controls are implemented	As required	Foreman
Undertake exposure monitoring for hazardous chemicals or other respirable airborne contaminants in accordance with regulations, code of practice, or advice from hygienist.	As required	CM SM
Monitor Subcontractors to ensure that they are undertaking exposure monitoring in accordance with regulations, code of practice and contractual requirements	As required	CM SM

APPENDIX 1: WORKPLACE EXPOSURE STANDARDS

Table 1 Workplace Exposure Standards for Airborne Contaminants

Parameter	Short Term Exposure Limit (STEL)	8-Hr Time-Weighted Average (TWA)
Respirable Dust ¹	-	1 mg/m ³
Inhalable Dust ¹	-	10 mg/m ³
Wood Dust (soft wood)	10 mg/m ³	5 mg/m ³
Respirable Crystalline Silica (RCS)	-	0.05 mg/m ³
Diesel Particulate Matter (DPM) ¹	-	0.1 mg/m ³
Carbon Monoxide (CO) ³	200 ppm	30 ppm
Carbon Dioxide (CO ₂)	30,000 ppm	5000 ppm
Hydrogen Sulphide (H ₂ S)	15 ppm	10 ppm
Nitrogen Monoxide (NO)	-	25 ppm
Nitrogen Dioxide (NO ₂)	5 ppm	3 ppm
Sulphur Dioxide (SO ₂)	5 ppm	2 ppm
Welding Fume (not otherwise classified)	-	5 mg/m ³
Formaldehyde	2 ppm	1 ppm
Isocyanates (as NCO)	0.07 mg/m ³	0.02 mg/m ³
Methyl ethyl Ketone (MEK)	300 ppm	150 ppm
Benzene	-	1 ppm
Ethylbenzene	125 ppm	100 ppm
Toluene	150 ppm	50 ppm
Xylene	150 ppm	80 ppm
Notes		
1 No statutory TWA-WES exists. This is a recommended trigger value adopted by the AIOH.		
2 Oxygen levels MUST always be maintained between 19.5% — 23.5% by volume under normal atmospheric pressure.		

Table 2 Workplace Exposure Standards for Occupational Noise

Parameter	Peak	TWA
Occupational Noise L _{Aeq,8hr}	-	85 dB(A)
Occupational Noise L _{Cpeak}	140 dB(C)	-
Notes		
Adjustments to normalised noise exposure level L _{Aeq,8hr} for extended work shifts will be made in accordance with AS1269.1 when required.		

Table 3 Adopted Hand-Arm Vibration (HAV) exposure limits.

Parameter	Action Limit	Exposure Limit
Daily Vibration Exposure A(8)	2.5 m/s ²	5.0 m/s ²

Table 4 Adopted Whole-Body Vibration (WBV) exposure limits.

Parameter	Action Limit	Exposure Limit
Daily Vibration Exposure A(8)	0.5 m/s ²	1.15 m/s ²
Vibration Dose Value	9.1 m/s ^{1.75}	21 m/s ^{1.75}

APPENDIX 2: TYPICAL DUST GENERATING ACTIVITIES BY TRADE

Trade	Activity
General	General sweeping
	Mechanical sweeping
	Concrete drilling
	Concrete chopping (Kango)
	Materials handling
	Emptying bins
Concretors	Concrete grinding
	Concrete chopping
Brick / Blocklaying	Mixing motar
	Sweeping
	Cutting bricks / blocks
	Storing cement
	Cleaning scaffolds
Renderer	Mixing motar
	Sweeping
	Cutting / trimming / chopping
Plasterer	Hebal cutting
	Speed wall panel
	Gyprock joint sanding
	Gyprock cutting
	Cutting fibre cement sheeting

Trade	Activity
Tiling	Cutting tiles
	Cutting stone
	Cutting in joints
	Floor bed
Stone Mason	Cutting natural stone
	Floor bed
	Cutting composite stone
Services Trades	Wall chasing
	Core holes
Mechanical	Vermiculite spray
	Fire rating penetrations (fibre board)
Formwork	Grinding
	Patching
	Sweeping
	Drilling
Post Tensioning	Grouting