

Attachment 4

Construction Environmental Management Plan



CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

PCB-2181 MUCHEA ASBINS REMEDIATION PROJECT

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**CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN**

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REVISION HISTORY

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1 INTRODUCTION

1.1 PURPOSE OF THIS PLAN

The primary purpose of this Construction Environmental Management Plan is to document PCB Asbestos and Demolitions (PCB) project management systems, methods, documentation, practices and procedures and in doing so guide the PCB project team to ensure that the PCB-2181 Muchea ASBINS Remediation Works is delivered in accordance with:

- AS ISO 9001 Quality Management Systems;
- AS ISO 45001 Safety Management Systems;
- AS ISO 14001 Environmental Management System;
- PCB Workplace Health and Safety Management Plan
- PCB's Risk Analysis Workshop
- Work Health and Safety Act 2011 (*Federal*);
- Work Health and Safety Regulations 2011 (*Federal*);
- Workplace Health and Safety Act 2020 (WA)
- Workplace Health and Safety Regulations 2022 (WA);
- Guide to Work Health and Safety Incident Notification;
- Standard Operating Procedure Preventing the introduction of soil-borne pathogens on the Defence Estate in WA (WA-ENV-SOP-01);
- Dieback Working Group 'Management of Phytophthora Dieback in Extractive Industries';
- Phytophthora Dieback Management Plan – Defence Muchea Weapons Range
- Security and Estate Group: Asbestos Management Plan v5.1 (SEG AMP v5.1;
- Defence WHS Manual (Volume 2 and Volume 3);
- Defence Tailoring AS/NZ 31000:2009 Procedure 3;
- NEPM (2013) National Environmental Protection (Assessment of Site Contamination)
- Australian Government (1999): Commonwealth Environment Protection and Biodiversity;
- EPA Western Australia (1986): Environmental Protection Act 1986
- NEPM (2013) National Environmental Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013);
- Australian Government (1999): Commonwealth Environment Protection and Biodiversity;
- EPA Western Australia (1986): Environmental Protection Act 1986;
- DWER Native Vegetation Clearing Permit Conditions; and
- Western Ecological Flora Vegetation Fauna Report.

This CEMP shall serve as the principal document for the PCB project team and Subcontractors to ensure environmentally sensitive delivery of the project. This CEMP has utilised the above reference documents to ensure best practices are adopted with the aim of ensuring that remediation projects are completed with minimal impact to the environment.

This CEMP has been designed to ensure best practice and/or appropriate environmental management practices are applied throughout the remediation of Muchea Tracking Station and that the works comply with the above listed documentation.

<https://www.defence.gov.au/business-industry/industry-governance/industry-regulations/environment-and-heritage-manual>



This CEMP should be read in conjunction with the ECC will be reviewed and updated where necessary when further controls/mitigation is required.

1.2 ORGANISATIONAL STRUCTURE AND RESPONSIBILITIES OF KEY PERSONAL

Personnel responsible for the environmental management aspects of the project and implementation and maintenance of the CEMP:

Sheldon Brady	Director	
Denise Acha	General Manager	
Carey Geldenhuy	WHS Manager	
Kurtis Kavanagh	WHS Advisor	
Nathan Brady	Site Manager	

Sheldon Brady – Director Role and Responsibilities

- *Project Oversight* – Develops and approves plans for asbestos in soil remediation
- *Regulatory Compliance* – ensures the organisation has adequate resources to ensure regulatory compliance with environmental and workplace health and safety legislation associated with the project.
- *Risk Management* – evaluates potential environmental and human health risk associated with land remediation techniques and controls

Denise Acha – General Manager Role and Responsibilities

- *Project Management* – Oversees the projects timeline, budget and liaise with key project stakeholders and suppliers
- *Team Management* – Oversees the project scope and communicates with the onsite team, relaying vital information to the director
- *Reporting* – Updates stakeholders and the director on project progress, compliance and any emerging issues which may arise during the duration of the project
- *Financial Report* – Reviews project progress and expenditure, advises client of any additional costs/ scope creep

Carey Geldenhuy – WHS Manager Role and Responsibilities

- *Health and Safety* – Develops inductions catered towards the preservation of flora and fauna on the project, whilst also minimising the risk of dieback and asbestos cross contamination
- *Training* – Educates the team on WHS procedures and policies, develops emergency response procedures and ensures that members of the operational team are well versed in evacuation procedures
- *Ausditing* - Ensures that tool box talks, site inspections and pre-starts are undertaken in accordance with he requirements or the CEMP

Kurtis Kavanagh – WHS Advisor Role and Responsibilities

- *Site Inspections* – Regularly conducting site inspections to ensure that all safety and environmental protocols are being followed
- *Site Inductions/ Training* – carrying out inductions for subcontractors and PCB workers to ensure understanding of project scope is adequately conveyed to all staff

- **Advisory** – Acts as an advisor to the WHS Manager and General Manager on issues which may arise throughout the project. Writes project documentation to risk assess job steps and the potential for harm to occur whilst carrying out the scope, in consultation with workers

1.3 PROJECT DESCRIPTION

1.3.1 Background

The Muchea Air Weapons Range was established during the second world war and is currently used for bombing practice and for training aircrew instructors (GHD, 2020). It also hosts a small arms range and is used by the Army for other training activities including air to ground gunnery, driver training and general field training (GHD, 2020). The site contains remains of a radar tracking station which operated between 1960 and 1964 (GHD, 2020). The tracking station included a former powerhouse, former housing area, former observation tower and a former rocket gunnery range (GHD, 2020).

A Detailed Site Investigation (DSI) completed by GHD (2019) identified a potential risk to human health associated with the presence of asbestos containing materials (ACM), friable asbestos and asbestos fines in shallow soils in the vicinity of the buildings associated with the former radar tracking station. The Department of Defence Contamination Risk Assessment Tool assessed the risk as ‘high’. Asbestos has been identified within soils to seven locations at Muchea Rifle Range. The seven locations are in the main associated with historical redundant structures associated with the former Defence Muchea Tracking Station. The structures have been previously demolished and/ or are fire damaged and therefore in poor condition.

1.3.2 Project Location

The Muchea Air Weapons Range is approximately 35 km north-east of Perth and 8 km north-west of RAAF Pearce. The property tenure is Vacant Crown Land with a lease agreement in place between the Department of Defence and the Western Australian State Government.

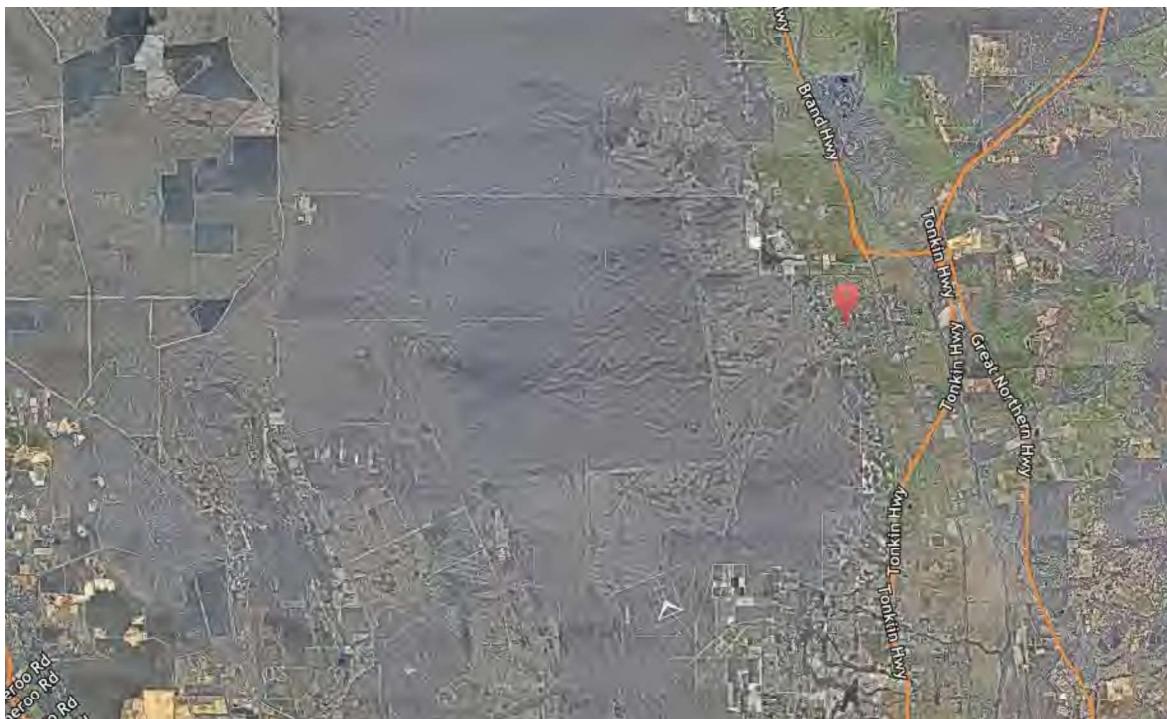


Figure 1 – Project Location Muchea -(Vacant Crown Land Lot 500 on Deposited Plan 54937)

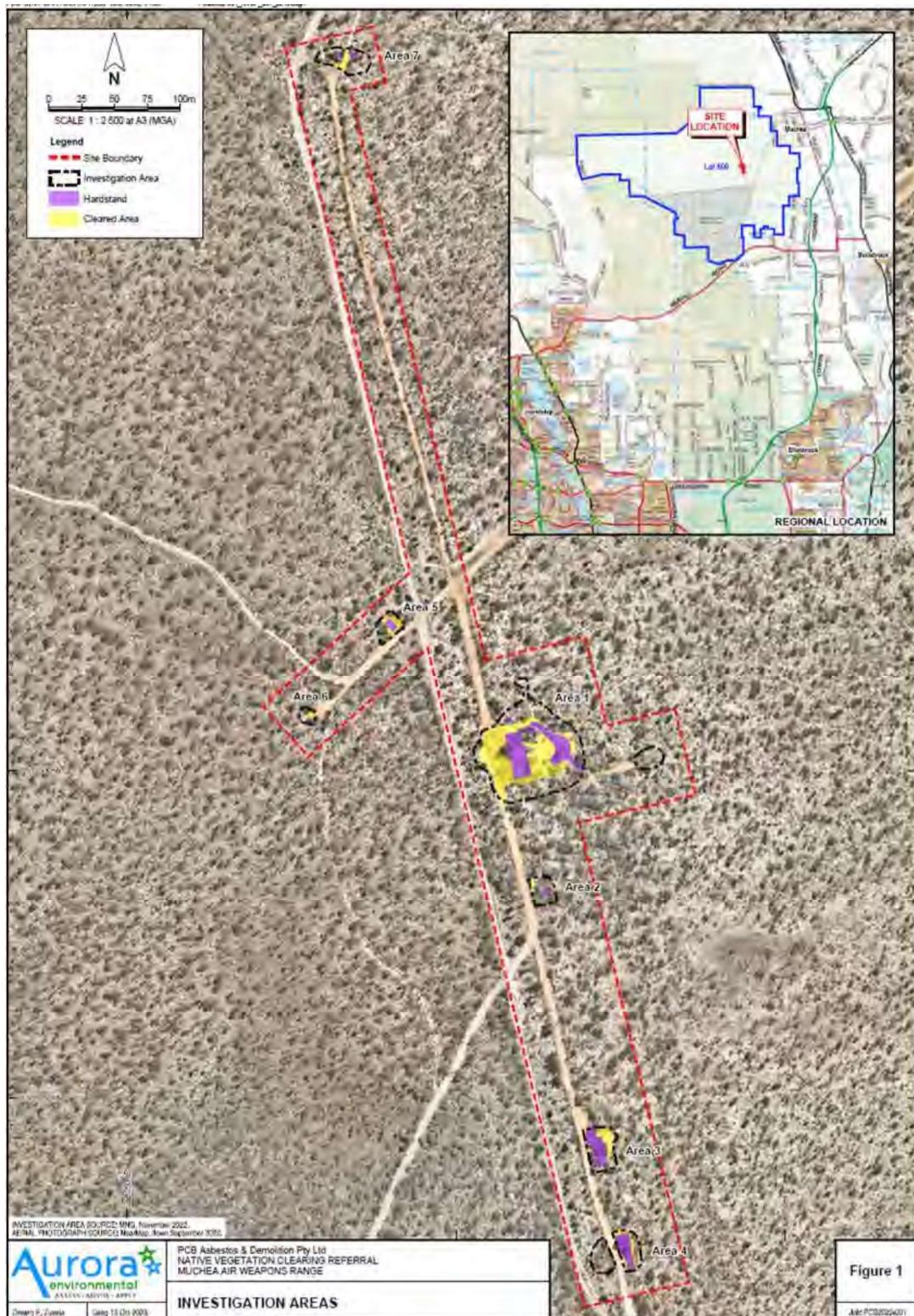


Figure 2 - Location of Asbestos Impacted Areas Within Muchea Rifle Range

1.3.3 Overview

The scope of the project involves the removal of Asbestos in Soils (ASBINS) to seven locations totalling 7,71 ha, with the total area of soils to be removed totalling 0.43 ha. To facilitate access, grading and resurfacing of existing gravel access tracks is also required.

As part of the early discussion with Defence ESM it was recognised that a Native Vegetation Clearance Permit was required from DWER in addition to the Defence ECC approvals. Therefore, PCB have engaged Paul Zuvela Director of Aurora Environmental to assist with the application process.

The asbestos remediation works shall be carried out in accordance with ME22001 Morgan Environmental Risk Assessment, Defence Estate and Infrastructure Group Asbestos Management Plan v5.1, WHS Legislation, Codes of Practice Safe Removal of Asbestos, PCB Asbestos Removal Control Plan, PCB SWMS and other relevant project documentation. PCB shall use techniques that so far as reasonably practical minimise the impacts to the existing flora and fauna. To this end, Western Ecological whom has undertaken a Flora, Vegetation and Fauna Report I January 2023 to identify the areas where flora and fauna may be impacted by the project.

1.3.4 Program

Works are scheduled to commence January 2024 and be completed by April 2024. It is estimated that the project shall take approximately 16 weeks to complete. Works shall cease during total fire bans, bush fires, weapons firing and inclement weather. Normal working hours onsite will be 06.00 - 18.00 Monday to Saturday.

1.3.5 Major Scope Items

- Identification and protection of existing services;
- Installation of site laydown at the Archibald Street site entrance comprising of site amenities to be established to allow site supervisor to conduct prestart, lunch room, toilets and hand washing station.
- When traversing site ensure all vehicles and personnel remain within demarcated work areas or existing tracks/firebreaks;
- To provide truck access, grade and resurface existing gravel access track from Archibald Street as identified within Section 3.3.
- Comply with the requirements of Phytophthora Dieback Management Plan – Defence Muchea Weapons Range. PCB is cognisant of the risk of phytophthora dieback to flora which is presented by the mobilisation of both workers and plant throughout this project. Phytophthora dieback will be managed in accordance with State Phytophthora Dieback Management and Investment Framework. Controls which will combat the spread of dieback include a washdown station for plant and machinery, weed and seed certification for mobilisation of plant and personal washdown facilities including 70% methylated spirit and water dilution for workers boots as per the management framework.
- Plant and equipment wash down areas to be set up at boundary of each die back area, at the markers, to allow wash down of plant/machinery to prevent further spread of die back within the site;
- Material imported will be imported by tip truck from an approved supplier Dieback free supplier;
- Protection of existing flora and fauna will be undertaken in conjunction with Western Ecological Report so far as is reasonably practicable (SFARP) without impacting the overall project objective which is to remove the asbestos. SFARP, the clearing of large trees and shrubs, particularly Banksia, shall be avoided;

- Workers will agitate the soil and bushes prior to clearing, working in a line and conduct clearing in one direction to allow dispersal of fauna;
- Manual clearing will be used where possible around mature trees;
- Road re-surfacing and grading will not exceed the footprint of existing track therefor not requiring any flora clearing in the process;
- Removal of Asbestos in Soils in accordance with ME22001 Morgan Environmental Risk Assessment, Defence Estate and Infrastructure Group Asbestos Management Plan v5.1, WHS Legislation, Codes of Practice Safe Removal of Asbestos, PCB Asbestos Removal Control Plan, PCB SWMS and other relevant project documentation;
- During asbestos remediation works, PCB will decontaminate plant and equipment to minimise the risk of cross contamination between work areas;
- Clearance certification to be provided post remediation works by independent licensed asbestos assessor engaged by EMOS;
- Prior to works commencing, mature flora to be flagged/demarcated to allow for safe re-instatement after works completed;
- Should it be required reinstatement of flora shall occur post the asbestos remediation works. Large significant native vegetation within the areas identified within Western Ecological Report as 'Good Zones' demarcated green shall be reinstated with similar vegetation as approved by Department of Defence; and
- There is a history of UXO finds and heavy explosive burial onsite. In the event that UXO's are identified during the project, PCB's Site Manager shall contact the EMOS representative for the project and act in accordance with the Commonwealth Policy on the Management of Land in Australia Affected By Unexploded Ordnance (<https://uxo.defence.gov.au/unexploded-ordnance-site-information>).

1.3.6 Remediation Activities

Works to each area are to be staged, remediation activities within each area may include but not be limited to the following;

- Mobilisation to site;
- Grading and resurfacing of existing gravel roads to provide access to work areas;
- Removal of asbestos-in-soils to an area of 0.43 ha;
- Asbestos containing materials shall be removed under appropriately controlled conditions;
- Asbestos shall be placed in 200um polythene marked bags or in appropriately lined trucks;
- Asbestos shall be loaded onto trucks with specialised plant and machinery;
- Transportation of asbestos waste off site to licensed waste facility for disposal as Special Waste Type 1;
- Obtain clearance certification of asbestos impacted areas by clients independent licensed asbestos assessor;
- Revegetation of impacted flora with similar vegetation to defined areas with plants from Department of Defence Nursery Industry Accreditation Scheme Australia (NIASA) approved Nursery; and
- Demobilise from site.



2 ENVIRONMENTAL MANAGEMENT

2.1 TRAINING, AWARENESS AND COMPETENCY

All personnel working on site (including sub-contractors) will undergo a level training commensurate with their responsibilities under the CEMP including but not limited to all Supervisors and Key Personnel to complete the Green Card training as per the requirements of WA-ENV-SOP-01.

Environmental training will take the form of daily pre-start meetings with details and controls issued in consultation with the Ventia Project Supervisor, the Environment and Sustainability Manager and any specialists required to undertake environmental controls.

For the duration of the works on site a toolbox meeting will be conducted on the first day of the project, specifically focused on Dieback management and conservation of flora and fauna. Prior to commencement of works a site walk through

All personnel and subcontractors will undergo a Ventia and PCB site-specific induction prior to commencing works on site. Training and competencies for all personnel will be reviewed by the WHS Advisor to confirm competencies prior to commencement on site.

Induction, training, records of qualifications, plant service records, SWMS and pre-start register will be collated by the WHS Officer from all personnel including subcontractors, scanned and stored on the PCB Management System (PCB DMS).

2.2 INCIDENT RESPONSE AND EMERGENCY CONTACTS

Incidents are to be reported to EMOS verbally within 1 hrs and in writing within 3 hrs. In addition, for notifiable incidents this is to be reported within 24 hrs to Comcare and Worksafe as per legislative requirements.

In the event of an emergency PCB will contact the 000, EMOS and RAAF Pearce Fire and Rescue 9571 7333.

NOTE – all environmental incidents will be reported to Defence via an AE444 web form available at:
www.defence.gov.au/estatemangement/lifecycle/IncidentManagement/Environment.asp

2.3 COMMUNICATION

Any updates to the ECC and CEMP will be communicated to all workers on a daily occurrence through the morning daily pre-start meeting. Toolbox meetings shall be held weekly and shall cover topics that are specific to the project.

Weekly updates of work areas and any upcoming environmental concerns will be liaised with the nominated Environment and Sustainability Manager (ESM) for the project.



3 IMPLEMENTATION AND OPERATION

3.1 ESTABLISHING ENVIRONMENTAL RISK

Environmental risk will be established in consultation with the Defence Environment and Sustainability Manager, Aurora Environmental Consultant, Western Ecological, DWER and any other stakeholders, as required.

3.2 ENVIRONMENTAL ACTIVITIES AND CONTROLS (ASPECTS AND IMPACTS REGISTER)

Please refer to Appendix A for the complete Risk register, the key impacts are outlined below:

- Site specific inductions will take place with an emphasis on decontamination procedures of personnel and plant, dieback management, fauna walk throughs and protection of native flora
- There are minimal hot works associated with the project scope, however works will not be carried out on days with a Fire Danger Index of Extreme or above;
- PCB workers will agitate the soil and bushes prior to clearing, working in a line and conducting clearing in one direction to allow dispersal of fauna in the area;
- In the unlikely event that an injury or mortality is sustained to native fauna during site works will be recorded and EMOS shall be notified;
- The total surveyed area by Western Ecological is 7.71 hectares which includes the footprint of preexisting buildings and structures. The surveyed area extends beyond the intended area to be cleared.
- Areas to be remediated are within boundaries demarcated by Morgan Environmental and soil impacted areas measure 0.43 hectares the majority of which is close to the existing defence infrastructure.
- Remediation areas that are not already hard stand or buildings have largely been classed by Western Ecological as Degraded or Completely Degraded refer to the Western Ecological Report Figure 8 - Vegetation Condition.
- Where vegetation is removed within this 0.43ha area that is identified as Good within the Western Ecological Report Figure 8 - Vegetation Condition, this vegetation shall be reinstated with a similar plants supplied from Nursery Industry Accreditation Scheme Australia (NIASA) accredited supplier such as Benara Nurseries information included in Appendix C.
- Gravel materials used to resurface the roads shall be supplied by Hall All Contracting. A copy of the Dieback documentation is included in Appendix D.

3.3 ENVIRONMENTAL MANAGEMENT PLANS OR MAPS

3.3.1 Access To Remediation Areas



Figure 3 – Existing Access Track From Archibald Street

Access to the asbestos impacted sites shall be via the existing 3km gravel road which will be graded and resurfaced to provide safe access to work areas.

3.3.2 Access And Laydown Areas

Site access shall be via Archibald Street with a site compound area set up within the existing cleared area immediately inside of the gate entrance, shown in blue below.

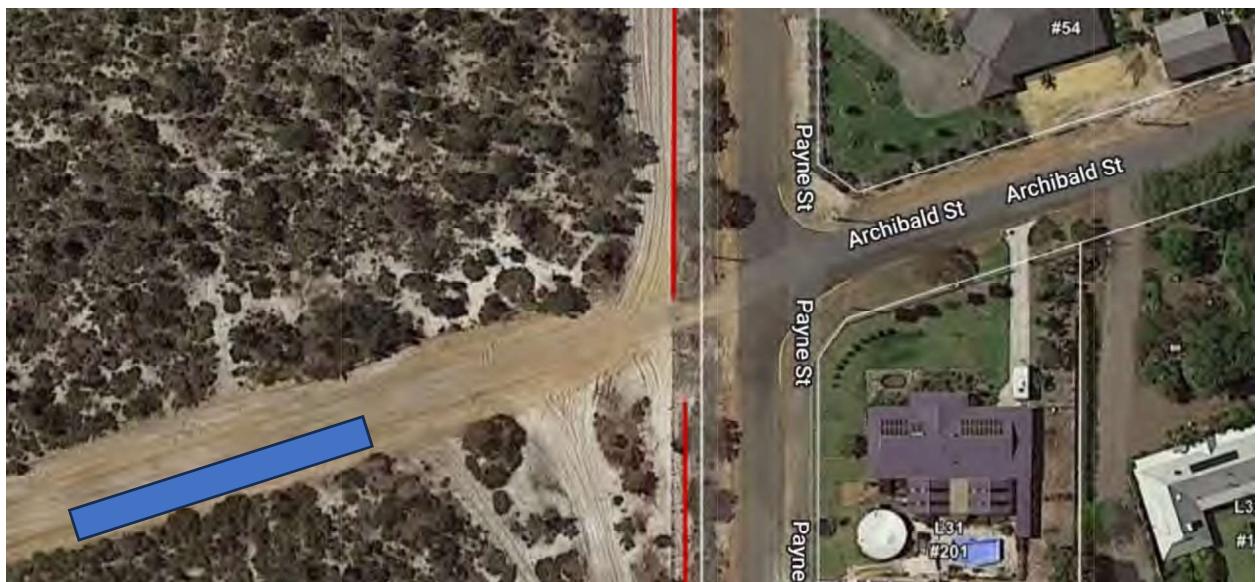


Figure 3 – Laydown Area And Archibald Street Site Entrance

3.3.2.1 Fauna Habitat and Vegetation Condition

The below figures are extracted from the Western Ecological Flora and Fauna report which identifies areas of Banksia Woodland key to the flora habitat and also provides a condition assessment of the vegetation for each surveyed area.

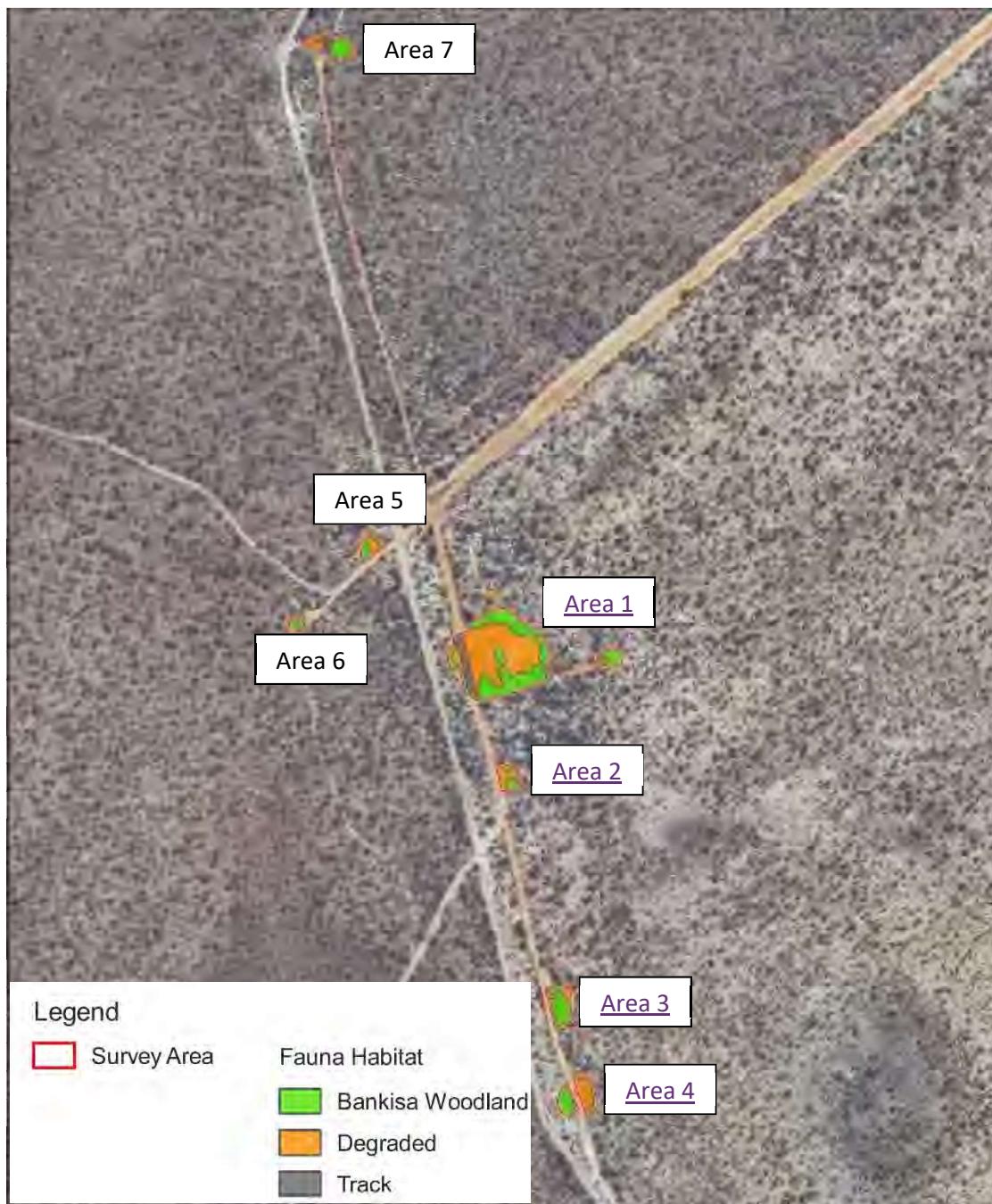


Figure 5 Fauna Habitat Extract From Western Ecological Report Refer Appendix B

The below figures have been complete by Western Ecological and identifies areas of Banksia Woodland and condition assessments throughout the surveyed areas of the site, which require active ecological management by PCB throughout the project.

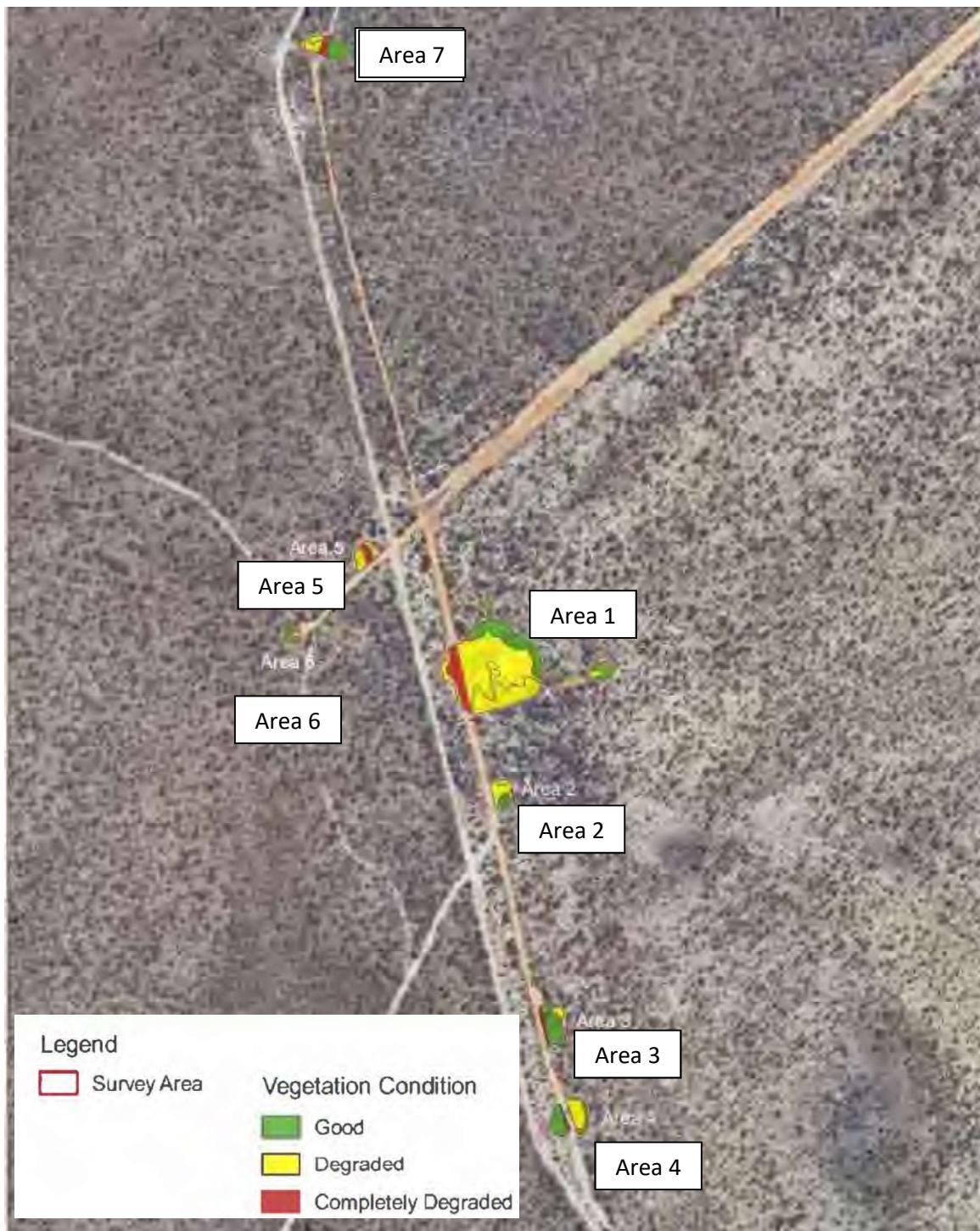


Figure 6: Vegetation Condition Extract From Western Ecological Report Refer Appendix B

3.4 MANAGEMENT SCHEDULES

Management schedules used during the day-to-day management of a project relevant to this CEMP are:

- Site Inspection Checklist – Daily by WHS Advisor
- Environmental Training Register – Daily Pre-start meetings.
- Communication and Consultation – Weekly Toolbox Meetings
- Chemical storage inspection – Daily

3.5 UNEXPECTED FINDS PROCEDURE

The Contractors acknowledges that unexploded ordinance may be present on certain parts of the Site.

Prior to commencing works, the Contractor will carry out survey activities, and sampling as required to determine the likelihood of an unexpected find. If UXO's are identified the Contractor will notify EMOS and the Project Manager prior to commencing any further works.

If any person engaged on the project considers they have encountered a UXO or will encounter or find UXO in the course of carrying out their work activities, they must:

- Immediately give the Contractor notice in writing;
- Clearly mark the location of the item;
- Protect it and do not touch nor disturb it further;
- Ensure all persons and Plant, Equipment and Work are kept clear of the item; aaand
- The Contractor will comply with any instructions from EMOS and Defence in relation to the item.

3.6 ENVIRONMENTAL MONITORING

The PCB Site Supervisor in consultation with the ESM and WHS Advisor will:

- Conduct daily monitoring of work sites to check for fauna.
- Conduct daily Tree Protection Zones inspections and monitoring.
- Carry out flora inspections to ensure clearing which is required is within the boundary of the delineated areas.

3.7 AUDITING

Auditing of the controls proposed in this CEMP will be completed weekly by the WHS Advisor / Site Supervisor. PCB will invite the ESMs on regular compliance inspections to ensure PCB are implementing the best techniques, ensuring all risks are being managed and fostering a collaboration and education of the entire project team.

3.8 CEMP REVIEW

The CEMP will be reviewed weekly by PCB, including looking at the environmental management controls to ensure they are still relevant to the activities being undertaken.

PCB encourages innovation and encourages their workforce to suggest better ways of doing the works. Any changes to the CEMP will be discussed with the ESM prior to implementation.

PCB ASBESTOS AND DEMOLITION PTY LTD

MUCHEA ASBINS REMEDIATION

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN



APPENDIX A – RISK ASSESSMENT

Construction Risk Analysis Workshop



PROJECT STAGE	TASK / ACTIVITY / ASPECT	HAZARDS OR ASPECTS & IMPACTS ASSOCIATED WITH THIS ACTIVITY	CAUSE	RISK RATING CONSEQUENCE	CURRENT RISK RATING CONSEQUENCE	CONTROLS / MITIGATION MEASURES	RISK RATING CONSEQUENCE	RISK RATING CONSEQUENCE
							LOW	Medium
Health and Welfare	Drugs and alcohol	<ul style="list-style-type: none"> Accidents/incidents occurring as a result of individual under the influence of drugs or alcohol 	<ul style="list-style-type: none"> Excessive use of drugs and alcohol out of work hours and reporting for work duties not fit for work 	Possible	Medium	<ul style="list-style-type: none"> PCB Drug and Alcohol Procedure PCB Resolution of HSE Issues Procedure PCB Fitness for Work Procedure PCB Fitness for Work Policy PCB Work Health and Safety Policy PCB Drug & Alcohol Policy PCB Code of Conduct Policy Project WHSMP Guidance Note - Alcohol and other drugs at the workplace 2008 Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 	<ul style="list-style-type: none"> All personnel attending site will be breathalysed before pre start each day. Personnel will be subject to alcohol and drug testing as requested by PCB Asbestos And Demolition Site Management. Alcohol and drug testing and actions taken as a result of a positive test will be conducted in accordance with Project WHSMP. All drugs or medication must be declared and only daily dose carried on site. Requirement to arrive at work in fit state and not under the influence of drugs and/or alcohol to be outlined at Inductions. Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings. 	<ul style="list-style-type: none"> Unlikely
Fatigue	<ul style="list-style-type: none"> Working/performing construction activities in a fatigued state and increasing the risk of accident/incident 	<ul style="list-style-type: none"> Long work hours. Extreme work/weather conditions. Inadequate quality rest 		Likely	High	<ul style="list-style-type: none"> PCB Fatigue Management Policy PCB Fitness for Work Policy PCB Work Health and Safety Policy PCB Fitness for Work Procedure Project WHSMP Code of Practice - Working Hours 2006 Code of Practice - Working Hours Risk Management Guidelines 2006 Code of practice - Fatigue management for commercial vehicle drivers 2019 Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 	<ul style="list-style-type: none"> Site Manager and Supervisors will monitor the fitness for work of all personnel and the physical requirements of their work. All personnel will have no less than 10 hours break between shifts PCB fatigue management policy to be displayed within site office and lunch room for viewing. Site Managers approval is required for work hours between twelve (12) and fourteen (14) hours in duration. Work hours in excess of fourteen (14) hours shall be planned and subject to a risk assessment by the Site Manager and approval from the Project Manager. A twenty-four (24) hour rest day (RDO) shall be scheduled following thirteen (13) consecutive days of work, i.e., personnel are to work a thirteen-day fortnight or shorter. Where fatigue issues are identified, appropriate action is to be taken and where appropriate outlined in SWMS - e.g., organise a work break, reschedule work tasks, rotate operators of plant/equipment etc. Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings. 	<ul style="list-style-type: none"> Major

Construction Risk Analysis Workshop



PROJECT STAGE	TASK / ACTIVITY / ASPECT	HAZARDS OR ASPECTS & IMPACTS ASSOCIATED WITH THIS ACTIVITY	CAUSE	CURRENT RISK RATING	CONSEQUENCE	RISK RATING	CONTROLS / MITIGATION MEASURES		CONSEQUENCE	RISK RATING
							DOCUMENTS	CONTROLS / MITIGATION MEASURES		
Health and Welfare (continued)	Hazardous Substances	<ul style="list-style-type: none"> Identified hazardous substance can cause severe and irreversible health effects if exposure is uncontrolled and health surveillance and monitoring does not occur 	<ul style="list-style-type: none"> Exposure to the following Hazardous Substances: <ul style="list-style-type: none"> Acrylonitrile, Inorganic Arsenic, Asbestos, Benzene, Cadmium, Inorganic chromium, Creosote, Isocyanides, Inorganic mercury, 4,4'-Methylene bis[2-chloroaniline] (MOCA), Polychlorinated biphenyls (PCBs), Organophosphate pesticides, Pentachlorophenol (PCP), Polycyclic aromatic hydrocarbons (PAH), Crystalline Silica, Thallium, Vinyl Chloride, Lead, Styrene and Radioactive Material 	High	Major	Medium	<ul style="list-style-type: none"> PCB Hazard Identification, Risk Assessment and Control Procedure PCB Personal Protective Equipment Procedure PCB Work Health and Safety Policy PCB Hazardous Substance Register PCB Hazardous Substance Risk Assessment Project WHSRMP Health monitoring guide for persons conducting businesses or undertakings Health monitoring guide for workers Code of Practice - Labelling of Workplace Hazardous Chemicals 2015 Code of Practice - Preparation of Safety Data Sheets for Hazardous Chemicals 2015 Code of Practice - How to Manage and Control Asbestos in the Workplace 2015 Code of Practice - How to Safely Remove Asbestos 2015 Code of Practice - Control of Scheduled Carcinogenic Substances [NOHSC:2014(1995)] Management and control of asbestos in workplaces [NOHSC:2018 (2005)] - Safe Work Australia Safe Removal of Asbestos [NOHSC:2002 (2005)] - Safe Work Australia Safe Work Australia (How to Safely Remove Asbestos) Code of Practice 2020 Code of Practice - Managing Risks of Hazardous Chemicals in the Workplace 2015 Control of Workplace Hazardous Substances [NOHSC:2007(1994)] - Safe Work Australia Code of Practice - Managing risks of hazardous chemicals in the workplace Estate & Infrastructure Group Asbestos Management Plan V5.1 Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 	<ul style="list-style-type: none"> Induction and ongoing training to all employees with the potential for exposure All chemicals to be stored in conjunction with provided MSDS. Hazardous substance register to be made available on site along with MSDS Review and adherence to MSDS and completion of Hazardous Substance Risk Assessment and SWMS prior to use. Suitable PPE to be provided and worn. Engineering controls to be investigated and implemented as appropriate. Extraction/ventilation to be made available if required. Air Monitoring of workplace/space & results to be recorded. Results made available to employees. Records on such hazardous substances to be readily available to employees, contractors, relevant authorities and emergency services. Management plan to be devised to manage the use of such identified hazardous substances. Labels to be maintained and referred to. Emergency information/requirements to be captured in SWMS. Health surveillance records to be maintained and recorded. All related documents to be made available to workers upon request. Occupational Hygienist / Licensed asbestos assessor to be contacted upon the discovery of hazardous substance i.e., Lead or Asbestos. Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings. 	Unlikely	Medium

Construction Risk Analysis Workshop



PROJECT STAGE	TASK / ACTIVITY / ASPECT	HAZARDS OR ASPECTS & IMPACTS ASSOCIATED WITH THIS ACTIVITY	CAUSE	CURRENT RISK RATING	RISK RATING	CONTROLS / MITIGATION MEASURES	DOCUMENTS	CONSEQUENCE	RISK RATING	RESIDUAL RISK RATING
									LIKELIHOOD	
Health and Welfare (continued)	Heat Stroke / Radiation	• Heat stress/heat stroke skin cancer, dehydration	• Excessive working in unshaded areas, during periods of high UV radiation	High	Moderate	• Define minimum clothing and protective equipment levels for sun protection • All practical measures will be taken to reduce the risks associated with heat exposure to sub-contractors and employees. Solutions will be identified in consultation with workers (i.e. - air-conditioned vehicles and rest areas, suitable protective clothing to include wide brimmed hats, sunscreen creams; plentiful supplies of water and ice; scheduling of work times in accordance with weather report) • Provide adequate clothing and sun-cream to protect against UV radiation. • Provide sufficient supplies of cold water to ensure rehydration • Provide shading/work rescheduling for periods of excessive UV radiation. • Provide training to Supervisors and Managers to recognise heat stress. • Monitor Contractor controls regarding protection from UV radiation.	• PCB Hazard Identification, Risk Assessment and Control Procedure • PCB Personal Protective Equipment Procedure • PCB Work Health and Safety Policy Project WHSMP • Code of Practice – How to Manage Work Health and Safety Risks 2018 • Code of Practice - Managing the work environment and facilities 2018 • Guidance Note - Exposure to solar ultraviolet radiation (UVR) 2019 • Guidance Note - Managing the risks of working in heat • Guidance Note - The protection of workers from the ultraviolet radiation in sunlight (Safe Work Australia 2008) • Bureau of Meteorology Heatwave Knowledge Centre • Work Health and Safety Act 2011 • Work Health and Safety Regulations 2011	Unlikely	Moderate	Low
Hygiene			• Site amenities kept in an untidy and unhygienic manner causing the generation/encouragement of disease	Moderate	Medium	• Match amenity capacity to site numbers (1 w/c per 15 workers) • All personnel attending site to complete and submit a PCB Covid-19 declaration form. • Ensure Covid-19 rules and recommendations are adhered to and followed on site. • Stay up to date with WA and Australian Covid-19 restrictions. • First Aid Procedure established and publicised. • Match sewage/water/food storage and use capacity to amenity utilisation. • Check condition of amenities during weekly inspection. • Ensure site housekeeping is kept to a high standard at all times. • Masks to be provided on site if required. • Hand sanitiser to be made available on site. • Ensure training and PPE provisions provided. • Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings.	• PCB Drug and Alcohol Procedure • PCB Fitness for Work Procedure • PCB Fitness for Work Policy • PCB Covid-19 Policy • PCB Work Health and Safety Policy • PCB Drug & Alcohol Policy • PCB Code of Conduct Policy • Project WHSMP • Code of Practice - Managing the work environment and facilities 2011 • Code of Practice – Workplace amenities and facilities 2002 • National guide for safe workplaces – COVID-19 • Code of Practice - Control of Work-related exposure to Hepatitis and HIV [Blood Born] Viruses [NOHSC:2010 (2003)] • Work Health and Safety Act 2011 • Work Health and Safety Regulations 2011	Possible	Rare	Low

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PROJECT STAGE	TASK / ACTIVITY / ASPECT	HAZARDS OR ASPECTS & IMPACTS ASSOCIATED WITH THIS ACTIVITY	CAUSE	CURRENT RISK RATING	RISK CONSEQUENCE	LIKELIHOOD	CONTROLS / MITIGATION MEASURES		DOCUMENTS	RISK RATING	CONSEQUENCE	
							Very Low	Low				
Health and Welfare (continued)	Mental and Physical wellbeing of personnel on site	• Personnel not presenting FFW, distracted whilst at work increasing potential for incidents/accidents	• Personal circumstances, poor sleep, poor diet, second job, bullying and harassment, mental / physical health of self or family / friends etc.	Low	Minor	Possible	<ul style="list-style-type: none"> PCB Work Health and Safety Policy PCB Drug & Alcohol Policy PCB Equal Employment Opportunity Policy PCB Vision and Values Statement PCB Code of Conduct PCB Diversity Policy PCB Fitness for Work Policy PCB Employee Relations Policy Project WHSMP Guidance Note – Work-related psychological health and safety 2019 Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 	<ul style="list-style-type: none"> Implement PCB Fitness for Work Policy FFW requirements made clear at induction, Awareness sessions about effects on fitness for work from drug & alcohol abuse. Personnel shall inform their management of any medication they are prescribed and / or taking. Random drug and alcohol testing. Supervisor to monitor all personnel on site For Cause testing in the event a member of the workforce is involved in an incident. Pre - employment medical including D&A (where applicable) Monitoring absenteeism and workload changes. Employee Assistance Program. Posters to be displayed in lunch room and office. Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings. 	<ul style="list-style-type: none"> • Implement PCB Fitness for Work Policy • FFW requirements made clear at induction, Awareness sessions about effects on fitness for work from drug & alcohol abuse. • Personnel shall inform their management of any medication they are prescribed and / or taking. • Random drug and alcohol testing. • Supervisor to monitor all personnel on site • For Cause testing in the event a member of the workforce is involved in an incident. • Pre - employment medical including D&A (where applicable) • Monitoring absenteeism and workload changes. • Employee Assistance Program. Posters to be displayed in lunch room and office. • Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings. 	Low	Minor	Rare
Violence aggression and bullying	Bullying and/or harassment in the workplace can be defined as repeated, unreasonable or inappropriate behaviour directed towards a worker or group of workers that creates a risk to H & S.	• Antisocial behaviour. Can occur from internal, external and/or client sources		Medium	Minor	Likely	<ul style="list-style-type: none"> PCB Vision and Values Statement PCB Code of Conduct PCB Diversity Policy PCB Employee Relations Policy Guidance Note – Preventing and responding to workplace bullying Guidance Note – Preventing workplace violence and aggression 2021 Equal Opportunity Act 1984 Racial Discrimination Act 1975 Human Right and Equal Opportunity Commission Act 1986 Disability Act 1992 Sex Discrimination Act 1984 Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 	<ul style="list-style-type: none"> Raise awareness of zero tolerance policy through site meetings and interactions with the workers. Bullying is not tolerated on a PCB in any forms. Report any instance of violence, aggression or bullying. Convey very clearly to all workers that bullying is inappropriate and will not be tolerated. All bullying events to be investigated. Employee Assistance Program. Posters to be displayed in lunch room and office. Provide strong leadership to address reports of violence and aggression in the work place. Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings. 	<ul style="list-style-type: none"> • Raise awareness of zero tolerance policy through site meetings and interactions with the workers. • Bullying is not tolerated on a PCB in any forms. • Report any instance of violence, aggression or bullying. • Convey very clearly to all workers that bullying is inappropriate and will not be tolerated. • All bullying events to be investigated. • Employee Assistance Program. Posters to be displayed in lunch room and office. • Provide strong leadership to address reports of violence and aggression in the work place. • Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings. 	Low	Minor	Unlikely
Smoking	Non-smokers being exposed to passive smoke resulting in health issues and consequences. Smoke butts littering site	• No designated smoking parameters for smoking on PCB Asbestos & Demolition project site. Smokers dropping butts at will. Designated smoking areas and/or bins		Medium	Minor	Almost Certain	<ul style="list-style-type: none"> PCB Work Health and Safety Policy PCB Drug & Alcohol Policy PCB Code of Conduct Project WHSMP Guidance Note - Elimination of Environmental Tobacco Smoke in the Workplace (NOHSC: 3019 (2003)) Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 	<ul style="list-style-type: none"> Smoking is prohibited in all PCB vehicles. No smoking in buildings, main thoroughfares and within 5m of building entrances and air intlets. Smoking bins and designated areas on site provided and clearly designated. Employees not to smoke in circumstances where other employees will breathe air containing tobacco smoke. Smokers encouraged to quit - counselling and support provided. Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings. 	<ul style="list-style-type: none"> • Smoking is prohibited in all PCB vehicles. • No smoking in buildings, main thoroughfares and within 5m of building entrances and air intlets. • Smoking bins and designated areas on site provided and clearly designated. • Employees not to smoke in circumstances where other employees will breathe air containing tobacco smoke. • Smokers encouraged to quit - counselling and support provided. • Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings. 	Low	Minor	Unlikely

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							LIKELIHOOD	RISK RATING			
Health and Welfare (continued)	Vibration	<ul style="list-style-type: none"> Vibration white finger or musculoskeletal injury 	<ul style="list-style-type: none"> Use of tools and equipment that produce vibration when operated. Excessive vibration exposure can cause health effects to individuals exposed. 	High	Major	Medium	<ul style="list-style-type: none"> Consider accessories such as anti-vibration gloves, anti-vibration handles or internal damping mechanisms that may be available. Train workers on exposure times, recognising symptoms and good work practices e.g. resting the tool on a support as much as possible, rotating job tasks etc. Regularly maintain and inspect vibrating tools Conduct vibration risk assessment for all relevant activities. Controls to be identified in Task SWMS / ISA. Obtain from the tool manufacturer specifications on vibration rates and calculate exposure values to limit worker exposure. Choose tools with the lowest vibration rates Identify vibration frequencies and usage times for all vibrating equipment. 	<ul style="list-style-type: none"> PCB Hazard Identification, Risk Assessment and Control Procedure PCB Personal Protective Equipment Procedure PCB Work Health and Safety Policy PCB Training and Competencies Policy Project WHSMP Code of Practice - Managing noise and preventing hearing loss at work 2020 Code of Practice: Hazardous manual tasks 2018 Guidance note – Managing risks of exposure to hand-arm vibration in workplaces Guidance note – Measuring assessing hand arm vibration Vibration exposure and the provision of vibration control measures in Australian workplaces (Safe Work Australia) Noise and Vibration Management (WorkSafe WA) Environmental Protection Act 1986 Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 	Medium	Major	Medium
Noise	<ul style="list-style-type: none"> Noise induced hearing loss 		<ul style="list-style-type: none"> Impact sound of demolition and associated plant activity. Noise can result not only in hearing loss, but disturbance to people working within the vicinity. 	High	Major	Medium	<ul style="list-style-type: none"> PCB Hazard Identification, Risk Assessment and Control Procedure PCB Personal Protective Equipment Procedure PCB Work Health and Safety Policy PCB Training and Competencies Policy Project WHSMP Code of Practice - Noise Management and Protection of Hearing at Work [NOHSC: 2009(2004)] Code of Practice – Managing noise and preventing hearing loss at work 2020 Code of Practice – Managing noise at workplaces 2002 Code of Practice - Hazardous manual tasks 2018 AS/NZS 2436-2010 - Guide to Noise Control on Construction, Maintenance and Demolition Sites Noise and Vibration Management (WorkSafe WA) Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 	<ul style="list-style-type: none"> Review SWMS / ISA for high noise activities and adequate controls. Use / hire equipment emitting < 85 dB(A) noise level. Provide personnel with suitable hearing protection Train personnel in the wearing and maintenance of hearing protection. Enforce use of hearing protection in high noise areas. Noisy work activities to be scheduled for times that cause minimal annoyance. Manage personal noise exposure to ensure below action level of 85 dB(A). Establish Hearing Protection Zone and signage; restrict personnel access. Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings. 	Medium	Unlikely	Medium

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							Likely	Medium	Unlikely	Low
2. Emergency Management	Chemical Spill / Leak	<ul style="list-style-type: none"> Emergency response for Chemical Spill / leak is not planned for or if planned for the response is not known, practised or reviewed for effectiveness 	<ul style="list-style-type: none"> Poor planning and consideration. Requirement overlooked, as is requirement to make known and review through putting plan into practice 	Likely	Moderate	Medium	<ul style="list-style-type: none"> PCB Emergency Response Procedure PCB Signs, Barricades and Housekeeping Procedure PCB Personal Protective Equipment Procedure PCB Work Health and Safety Policy PCB Hazardous Substance Register Project WHSMP Code of Practice - Managing risks of hazardous chemicals in the workplace 2020 Code of Practice - Labelling of workplace hazardous chemicals 2020 Code of Practice - Control of workplace hazardous substances [NOHSC:2007(1994)] Code of Practice – Preparation of Material Safety Data Sheets [NOHSC:2011(1994)] PCB Asbestos And Demolition Emergency Response Plan Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 	<ul style="list-style-type: none"> Emergency response plan for chemical spill / leak emergency to be devised, maintained, practised and reviewed. Mock emergency response drills to be conducted. Response procedure made known to all on site and accessible at all times. Spill Response Kits available and strategically located. Ensure chemicals are stored appropriately as per MSDS recommendations. Site management team trained (internally) in spill response procedure and requirements. Spill Response kits labelled on site map and periodically inspected/maintained. First aid equipment available in all PCB vehicles and offices / lunchrooms. Emergency services contact details easily accessible and available. 	<ul style="list-style-type: none"> Sufficient number of trained first aiders on site Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings. 	Medium
Critical Incident	<ul style="list-style-type: none"> Emergency response for a Critical Incident is not planned for or if planned for the response is not known, practised or reviewed for effectiveness 	<ul style="list-style-type: none"> Poor planning and consideration. Requirement overlooked, as is requirement to make known and review through putting plan into practice 		Likely	Major	High	<ul style="list-style-type: none"> PCB Emergency Response Procedure PCB Hazard Identification, Risk Assessment and Control PCB Incident, Hazard Reporting and Investigation Procedure PCB Injury and Illness Management Procedure PCB Work Health and Safety Policy First Aid kit Register Project WHSMP Guidance Note – Major hazard facilities Emergency Plans 2012 Code of Practice – How to manage work health and safety risks 2011 Code of Practice – First aid in the workplace 2019 Code of Practice – First aid in the workplace 2015 Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 	<ul style="list-style-type: none"> PCB's Emergency Response plan to be devised, documented, made known and implemented. Roles and responsibilities of Management to be clearly defined and known. Management and key stakeholders of Critical Response Plan to be trained. Mock Critical Incident Response drill, environmental or medical, to be conducted on mobilisation conducted periodically and reviewed for effectiveness Critical Incident Response Checklist to be implemented in event of critical incident. Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings. 	Possible	

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							MEDIUM	
Emergency Management (continued)	Electricity	<ul style="list-style-type: none"> Electrocution, no response defined & increased exposure to electricity and possible exposure to electricity by others. Plan not practised or made known 	<ul style="list-style-type: none"> Use of electricity. Poor planning 	High	Catastrophic	<ul style="list-style-type: none"> PCB Emergency Response Procedure PCB Work Health and Safety Policy Project WHSMP Code of Practice – Managing electrical risks in the workplace 2018 Code of Practice – Managing Electrical Risks in the Workplace 2015 AS/NZS 3012: 2003 Electrical Installations – Construction and Demolition Sites Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 	<ul style="list-style-type: none"> Emergency Response Plan for first aid response, including electrocution to be devised, maintained, practised and reviewed. Sufficient number of first aiders on site and Response procedure made known to all on site and accessible at all times. Electrical isolation points to be identified and person/warden to be allocated to attend to responsibility if required in event of electrocution. Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings. 	Medium
Emergency Response Plans	Emergency Response Plans	<ul style="list-style-type: none"> Emergency response plans for any type of emergency are jeopardised in terms of effectiveness because they are not made known and/or practised 	<ul style="list-style-type: none"> Emergency response plans are not trialled and reviewed. The same response plan (i.e. evacuation is always trialled). Key personnel are not trained or well-practiced in their response roles 	Medium	Likely	<ul style="list-style-type: none"> PCB Emergency Response Procedure PCB Work Health and Safety Policy Project WHSMP Code of Practice – Work Health and Safety Consultation, Co-operation and Coordination 2015 Code of Practice – Managing the Work Environment and Facilities 2015 Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 	<ul style="list-style-type: none"> Emergency Response Plans to be detailed at Site Induction including muster point location. Emergency Response Plans to be posted in Site Office and Site amenities. Individual Emergency Response Plans to be practised and trialled periodically on a rotating basis. PCB Asbestos And Demolition personnel to be induced and trained in emergency response to match position. Emergency Response Plan are documented and signed off on prior to mobilising to site. Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings. 	Low

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							LIKELIHOOD		
General	<ul style="list-style-type: none"> Explosion, gas leak, electrical incident, inclement weather, traffic incident, rescue at height, confined space, building collapse, natural disaster. Uncontrolled emergency incident leading to adverse outcomes and loss 	<ul style="list-style-type: none"> Poor work practices 	<ul style="list-style-type: none"> PCB Emergency Response Procedure PCB Work Health and Safety Policy PCB Permit Register Project WHSMP AS 3745-2010 Planning for emergencies in facilities Code of Practice – Work Health and Safety Consultation, Co-operation and Coordination 2015 Code of Practice – Construction Work 2015 Code of Practice – How to Manage Work Health and Safety Risks 2015 Code of Practice – Managing the Work Environment and Facilities 2015 Guidance Note – Major Hazard Facilities Emergency Plan 2012 Emergency Plan Fact Sheet Safe Work Australia Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 	High	Major	<ul style="list-style-type: none"> Establish emergency contact numbers and routes. Identify any Client specific emergency requirements Develop site Emergency Management Procedure. Develop Inclement Weather procedure Communicate/train site personnel in all emergency procedures. Ensure SWMS in place for all high risk works. Emergency Plan to be established for all high-risk works. Trained first aiders and fire wardens allocated and made known. Type of fire extinguisher to suit purpose (i.e. A:B:C for electrical, liquid etc.) access to fire extinguisher no more than 15m; signage 2m above floor; fire extinguisher mounted 10cm off floor but no higher than 1.2m from top of extinguisher etc. Specific emergency evacuation equipment made available as required. Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings. 	Medium	Major	Medium
				Likely					

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							DOCUMENTS	CONTROLS / MITIGATION MEASURES		
Emergency Management (continued)	Fire / Explosion	<ul style="list-style-type: none"> Emergency response for Fire / Explosion not planned for. Plan not practised or made known Delay in firefighting and communication response Ignition sources underestimated and not planned for or mitigated against No firefighting equipment Lack of trained personnel 	<ul style="list-style-type: none"> Poor planning. Oversight Poor work practices 	High	Catastrophic	High	<ul style="list-style-type: none"> PCB Emergency Response Procedure PCB Work Health and Safety Policy PCB Permit Register Project WHSMP Code of Practice – Fire Protection Association Australia (FPA) 2014 Code of Practice – Fire Management 2008 (Department of Environment and Conservation) Code of Practice – Work Health and Safety Consultation, Co-operation and Coordination 2015 Code of Practice – How to Manage Work Health and Safety Risks 2015 Code of Practice – Managing the Work Environment and Facilities 2015 Guidance Note – Major Hazard Facilities Emergency Plan 2012 Emergency Plan Fact Sheet Safe Work Australia 	<ul style="list-style-type: none"> Emergency Response Plan devised, maintained, practised and reviewed. Response procedure made known to all on site and accessible at all times. Site evacuation plan to be included in planning and made known to all on site. Introduce communication process with adjoining complex/site. Fire Wardens/site emergency personnel to be trained in warden duties and fire management techniques. Sufficient number of first aiders on site. Appropriate fire protection equipment (type, number, position) available and on register. Fire equipment to be maintained. Provide local Fire Service with details of site layout, access routes, hard stands etc. Obtain information on site fire service/fire management procedures. Maintain clear site access and egress routes at all times. Completion of Hot work permit (and close out) at all times. Suitability, accessibility and location of emergency equipment and first aid requirements to be assessed by competent person. Work areas containing flammable or explosive material / atmosphere to be closed off and secured. Display of appropriate signage for risk concerned. Display external emergency contact details on Emergency Information Sheet. 	Likely	Medium
					Catastrophic	High	<ul style="list-style-type: none"> Maintain site plan, identifying main service isolation points. Mark fire equipment location clearly on-site map. Provide all mobile plant with fire extinguisher Keep access to fire equipment clear at all times Type of fire extinguisher to suit purpose (i.e., A: Bc for electrical, liquid, textile, paper etc., with access to fire extinguisher no more than 15m; signage 2m above floor; fire extinguisher mounted 10cm off floor but no higher than 1.2m from top of extinguisher etc.) Train site personnel in the use of fire equipment. Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings. 			

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								LIKELIHOOD		
Emergency Management (continued)	Medical	<ul style="list-style-type: none"> Emergency response for medical emergency/incident is not planned for and if planned for is not practiced or known. Emergency response for a Vehicle Collision / Rollover is not planned for or if planned for the response is not known, practiced or reviewed for effectiveness No First Aid facilities established, no trained First Aiders, insufficient First Aiders no First Aid supplies 	<ul style="list-style-type: none"> Requirement for plan has been overlooked. Poor planning and maintenance of plan, including not making the plan known or practiced. 	High	Major	<ul style="list-style-type: none"> PCB Emergency Response Procedure PCB Work Health and Safety Policy First Aid Kit Register Project WHSMP Code of Practice – Managing the Work Environment and Facilities 2015 Code of Practice – First aid in the workplace 2019 Code of Practice – First aid in the workplace 2015 Guidance Note – Major Hazard Facilities Emergency Plan 2012 Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 	<ul style="list-style-type: none"> Emergency response plan for medical emergencies to be devised, maintained, practised and reviewed. Emergency response plan for vehicle collision / rollovers emergencies to be devised, maintained, practised and reviewed. Ensure competencies maintained and improved to deal with medical emergency scenario. Response procedure made known to all on site and accessible at all times. Sufficient number of trained first aiders on site. Publicise names of First Aiders across site. Emergency services contact details easily accessible and available. First aid equipment and resources on site to match occupational work and hazards of site. Medical supplies to be in accordance with First Aid Box Content. Medical supplies to be monitored and periodically maintained. Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings. 	Medium	Medium	Low
Reporting		<ul style="list-style-type: none"> Emergencies are not reported therefore response cannot be reviewed and plans revised and or improved 	<ul style="list-style-type: none"> Culture and/or practice of not reporting incidents and/or emergencies 	Moderate	Possible	<ul style="list-style-type: none"> PCB Emergency Response Procedure PCB Incident, Hazard Reporting and Investigation Procedure PCB Whistle blower Policy PCB Incident Investigation Report PCB Witness Statement Project WHSMP Comcare Incident Notification Form Work Health and Safety Incident Notification guide - Comcare Code of Practice – Work Health and Safety Consultation, Co-operation and Co-ordination 2015 Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 	<ul style="list-style-type: none"> WHSMP procedural requirement that all incidents are reported to supervisor and project manager. Notify Comcare of incident if required Minor incidents investigated/debriefed. Major incidents investigated/debriefed. WHS Officer to facilitate reporting and/or investigation process. Ensure incidents are discussed at each morning pre start and elaborated through discussion during tool box meetings. Response plans to be evaluated in light of reporting to evaluate effectiveness. Requirement that all incidents / emergencies are reported. 	Rare	Moderate	Low

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								RISK LEVEL		
Emergency Management (continued)	Trench Collapse / Engulfment	<ul style="list-style-type: none"> Emergency response for Trench collapse / engulfment is not planned for or if planned for the response is not known, practiced or reviewed for effectiveness 	<ul style="list-style-type: none"> Poor planning and consideration. Requirement overlooked, as is requirement to make known and review through putting plan into practice 	High	Catastrophic	<ul style="list-style-type: none"> Emergency response plan for trench collapse / engulfment emergencies to be devised, maintained, practiced and reviewed. Response procedure made known to all on site and accessible at all times. First aid and rescue equipment made available. Ensure ladder is always available for access and egress when working within trench area. Emergency services contact details easily accessible and available. Sufficient number of trained first aiders on site. Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings. 	<ul style="list-style-type: none"> PCB Emergency Response Procedure PCB Work Health and Safety Policy PCB Evacuation Procedure PCB Rescue Plan PCBS Trench Inspection Checklist Project WHSMP Code of Practice – Excavation Work 2015 Code of Practice – Excavation Work 2005 Code of Practice – Excavation Work 2018 Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 	Medium	Catastrophic	Medium
	Vehicle Incident	<ul style="list-style-type: none"> Emergency response for a Vehicle Collision / Rollover / Breakdown is not planned for or if planned for the response is not known, practiced or reviewed for effectiveness 	<ul style="list-style-type: none"> Requirement for plan has been overlooked. Poor planning and maintenance of plan, including not making the plan known or practiced No emergency response capability as requirement overlooked and not planned for 	High	Major	<ul style="list-style-type: none"> Emergency response plan for vehicle collision / rollovers / Breakdown emergencies to be devised, maintained, practiced and reviewed. Response procedure made known to all on site and accessible at all times. PCB Vehicle register to be kept up to date and reviewed. All vehicles to be serviced regularly and kept in good condition. All drivers and operators to hold valid licenses and tickets when operating any plant or vehicle. Sufficient number of trained first aiders on site. Emergency services contact details easily accessible and available. Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings. 	<ul style="list-style-type: none"> PCB Emergency Response Procedure PCB Work Health and Safety Policy PCB Training and Competencies Policy PCB Vehicle Register Project WHSMP Code of Practice – Fatigue management for commercial vehicle drivers 2019 Code of Practice – Traffic Management for Works on Roads 2021 (Main Roads WA) Guidance Note – Workplace traffic Management 2021 Guidance Note – Safe movement for vehicles at workplaces 2006 Department of Transport – Drive Safe handbook Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 	Medium	Catastrophic	Medium
	Discovery of Unexploded Ordnance	<ul style="list-style-type: none"> Death or disabling injury to personnel. 	<ul style="list-style-type: none"> Unforeseen requirement. 	High	Catastrophic	<ul style="list-style-type: none"> If a suspect UXO item is found - DO NOT TOUCH, disturb or tamper with the item in any way. This includes making any attempt to move the item to a 'safe' location. Mark the location so that it can be found later. Coloured tape or paint make easily recognised marker material. Inform the EMOS, Project Manager and site supervisor of the find. Inform the Police that a possible ammunition item has been found. They will instigate a request for Defence personnel to attend and dispose of the item. 	<ul style="list-style-type: none"> PCB Emergency Response Procedure PCB Work Health and Safety Policy Project WHSMP www.defence.gov.au/uxo/ Work Health and Safety Regulations 2011 Work Health and Safety Act 2011 	Medium	Catastrophic	Medium

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							LIKELIHOOD	CONSEQUENCE
General Planning	Communication and Consultation with External Parties	<ul style="list-style-type: none"> Non-conformance with client/external party requirements Clear communication and emergency response processes not established 	<ul style="list-style-type: none"> Clear communication processes not established 	Medium	Minor	<ul style="list-style-type: none"> PCB Work Health and Safety Policy PCB Operational Excellence Policy PCB Quality Policy PCB Induction and Training Procedure Project WHSMP Code of Practice – Managing the Work Environment and Facilities 2015 Code of Practice – Work Health and Safety Consultation, Co-operation and Co-ordination 2015 Guidance note - Formal consultative processes at the workplace 2006 Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 	Very Low	Low
Purchasing		<ul style="list-style-type: none"> Introducing hazards into the workplace such as - plant and equipment; chemicals and substances; office furniture and equipment; PPE etc. Also, potential to introduce new and/or uncontrolled wastes 	<ul style="list-style-type: none"> Poor purchasing management and administration 	Medium	Moderate	<ul style="list-style-type: none"> PCB Work Health and Safety Policy PCB Operational Excellence Policy PCB Quality Policy PCB Environmental Policy Project WHSMP PCB Hazardous Substance Register PCB Electrical Register PCBS Vehicle Register PCB Plant Mobilisation Checklist Code of Practice – Managing the Work Environment and Facilities 2015 Code of Practice – Work Health and Safety Consultation, Co-operation and Co-ordination 2015 Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 	Moderate	Low
				Likely	Unlikely			

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PROJECT STAGE	TASK / ACTIVITY / ASPECT	HAZARDS OR ASPECTS & IMPACTS ASSOCIATED WITH THIS ACTIVITY	CAUSE	CURRENT RISK RATING	CONSEQUENCE	RISK RATING	CONTROLS / MITIGATION MEASURES	
							DOCUMENTS	RISK RATING
General Planning (continued)	Understanding and complying with current legislation	Potential non-compliance with acts and regulations conditions potential resulting in harm to people, property or the environment	No method identified to ensure access/update with respect to current legislation	Medium	Moderate	Medium	<ul style="list-style-type: none"> PCB Work Health and Safety Policy PCB Operational Excellence Policy PCB Quality Policy Project WHSMP Code of Practice – Construction Work 2015 Code of Practice – Work Health and Safety Consultation, Co-operation and Coordination 2015 AS 4804 Occupational Health and Safety Management Systems - General Guidelines on principles, systems and supporting techniques AS/NZS ISO 45001:2018 - Occupational Health and Safety Management Systems – Requirements with guidance for use. Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 	Low
Induction and Training	Lack of identification of core skills and knowledge required	Poor planning		High	Likely	Major	<ul style="list-style-type: none"> PCB Work Health and Safety Policy PCB Fitness for Work Policy PCB Training and Competencies Policy PCB Employee Relations Policy PCB Code of Conduct Policy PCB Induction and Training Procedure PCB Subcontractor Selection & Engagement Procedure PCB Induction and Training Procedure Project WHSMP Site Induction Booklet Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 	Medium
				Medium	Unlikely	Major	<ul style="list-style-type: none"> Review information provided by SAI global subscription services to identify new legislation applicable to PCB Asbestos And Demolition. Ensure legislative documents and guidance material are either on site or available on site, and the procedure for access is known. Implement legislative changes on site as required. HSE Representative nominated and elected. Legal training requirements completed and captured. Incident management and recording system and procedures familiar to all Site personnel. Record Management and data control system in place. Ensuring applicable licenses, permits and agreements are in place. Notify work force of significant legislative changes and ensure PCB Asbestos And Demolition HSE procedures reflect such changes. Update PCB site notice board. Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings. 	Medium
				Medium	Possible	Possible	<ul style="list-style-type: none"> PCB Asbestos And Demolition inducted prior to mobilisation Construction Industry Induction Card (Blue / White) Define outstanding Training requirements as per training matrix for PCB Asbestos And Demolition employees. Complete training, update training record. Confirm subcontractor worker competency and qualification via issuing of skills and competency Register. Register to be reviewed by SM or delegate prior to subcontractors arriving on site. Identify high hazard activities, requiring formal competency. Check employee records and confirm current competency in place. Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings. 	Medium

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							RESIDUAL RISK RATING	RISK CONSEQUENCE					
General Planning (continued)	Worker/Subcontractor Communication and Consultation	<ul style="list-style-type: none"> Lack of understanding of project hazards and systems requirements. Formal and documented systems of communication not implemented Sub-contractors engaged have substandard safety systems and unsafe work practices or subcontractor non-performance, leading to safety incidents. 	<ul style="list-style-type: none"> Major hazards not identified and safety systems not implemented Hazard reporting and action on identified hazard controls not functional Delays in work schedule 	High	Major	Medium	<ul style="list-style-type: none"> PCB Work Health and Safety Policy PCB Subcontractor Selection & Engagement Procedure PCB Induction and Training Procedure Project WHSMP Site Induction Booklet Code of Practice – Managing the Work Environment and Facilities 2015 Code of Practice – Work Health and Safety Consultation, Co-operation and Coordination 2015 Guidance note - Formal consultative processes at the workplace 2006 Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 	<ul style="list-style-type: none"> Ensure all subcontractors sign onto site register and complete site induction. Issue relevant Job Description to all employees. Subcontractors to provide SWMS for works being carried out prior to attending site. Review subcontractor SWMS to ensure they are compliant. Subcontractors to provide plant Risk Assessments for machinery brought on site. Subcontractors to provide training competencies for specific works being carried out. Subcontractors to provide breath test each morning and are subject to random drug and alcohol testing. Subcontractors to contribute to prestart meetings each morning. Audit subcontractor work environments, ensure housekeeping, equipment and work methods are all in good order. Check all leads and equipment are appropriately tagged. 	<ul style="list-style-type: none"> Subcontractors to attend pre-mobilisation meeting. Assessment with Site Management to ensure understanding of requirements and expectations is understood. Meeting/assessment to include HSE capability assessment and review of both Risk Assessment and Environmental Aspects & Impacts Register applicable to contract. Review and confirm understanding of responsibilities with all employees/subcontractors. Update site notice board regularly. Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings. 	<ul style="list-style-type: none"> PCB Work Health and Safety Policy PCB Environmental Policy Project WHSMP Project CEMP Project SMP Code of Practice – Managing the Work Environment and Facilities 2015 Guidance note - Formal consultative processes at the workplace 2006 Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 	Medium	Major	Medium
Wild or feral animal/insects	Venomous or toxic animal or insect bite or sting		<ul style="list-style-type: none"> Severe injury or illness due to toxic effects 	High	Major	Medium	<ul style="list-style-type: none"> PCB Work Health and Safety Policy PCB Environmental Policy Project WHSMP Project CEMP Project SMP Code of Practice – Managing the Work Environment and Facilities 2015 Guidance note - Formal consultative processes at the workplace 2006 Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 	<ul style="list-style-type: none"> Identify likely poisonous snake/spider species in project area. Instruct workers NOT to move any animal/insect that is found. Contact site supervisor or project manager immediately. Confirm First Aider personnel can provide aid for snake/spider bites. Contact Emergency Coordination Centre. Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings. 	<ul style="list-style-type: none"> PCB Work Health and Safety Policy PCB Environmental Policy Project WHSMP Project CEMP Project SMP Code of Practice – Managing the Work Environment and Facilities 2015 Guidance note - Formal consultative processes at the workplace 2006 Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 	Medium	Unlikely	Medium	



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PROJECT STAGE	TASK / ACTIVITY / ASPECT	HAZARDS OR ASPECTS & IMPACTS ASSOCIATED WITH THIS ACTIVITY	CAUSE	CURRENT RISK RATING	RISK CONSEQUENCE	LIKELIHOOD	CONTROLS / MITIGATION MEASURES		DOCUMENTS	RISK RATING	CONSEQUENCE
							RESIDUAL RISK RATING	RISK CONSEQUENCE			
General Planning (continued)	Temporary services installation	• Electric shock or explosion from damaging underground services.	• Not conducting survey, scanning or calling dial before you dig.	High	Major	Unlikely	• Ensure excavation permit is in place, signed and adhered to. • Ensure excavation SWMS are in place and signed onto and updated if required. • Follow the 5Ps of Safe Excavation. Plan, Prepare, Pothole, Protect and Proceed. • Ensure spotters are in place during excavation works with clear communication. • Dial before you dig. • Consult service drawings. • Conduct service scanning. • Practice 'potholing' when suspected services are in the area. • Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings.	• PCB Work Health and Safety Policy • PCB Excavation Permit Project WHSMP • Underground Service Drawings www.1100.com.au/safety-information/digging-safely/www.1100.com.au/safety-information/duty-of-care/ • Dial Before Dig – The Essential First Step Brochure • Code of Practice – Excavation Work 2015 • Code of Practice – Excavation 2005 • Code of Practice – Excavation Work 2018 • AS 5488-2013 Classification of Subsurface Utility Information • Work Health and Safety Act 2011 • Work Health and Safety Regulations 2011	Medium	Medium	
Vehicles travelling with loads	Interaction with Mobile Equipment (Vehicle)	• Non-compliance of mobile plant and equipment when arriving on site	• Not following Traffic Management Plan • Delays in work schedule	High	Major	Unlikely	• Define clear access prior to entry of transport. • Provide driver a point of contact and clear instructions. • PCB to escort drivers when required. Escort procedures to be followed. • PCB Plant and Equipment Register to be maintained, updated and reviewed. • PCB vehicles to be serviced regularly and kept in good condition. • Establish laydown area with safe access and egress including appropriate signage. • All drivers and operators to hold valid licenses and tickets when operating any plant or vehicle. • Communicate access route and delivery time to other personnel and other contractors. • Personnel and vehicle segregation through use of barricading and signage. • Oversized loads to be planned, loaded and inspected prior to dispatch. • Site speed limits known by all and obeyed. • Traffic Management Plan for site in place (if require) and made known. • Designated loading/unloading area with signage. • Spotters in place whilst unloading at all times. • Follow procedures for loading/unloading of equipment. • Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings.	• PCB Work Health and Safety Policy • PCB Training and Competencies Policy • PCB Plant Inspection Checklists • PCB Vehicle Register • Project WHSMP • Code of Practice – Traffic Management for Works on Roads 2021 (Main Roads WA) • Guidance Note – Workplace traffic Management 2021 • Guidance Note – Safe movement for vehicles at workplaces 2006 • Department of Transport – Drive Safe handbook • Work Health and Safety Act 2011 • Work Health and Safety Regulations 2011	Medium	Medium	

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								LIKELIHOOD	CONSEQUENCE						
4. Overarching Hazards	Overarching Hazards	Electricity	<ul style="list-style-type: none"> Use of damaged electrical equipment or cables. Isolation and energisation. Uncontrolled release of energy Death or disabling injury 	<ul style="list-style-type: none"> Contact with energised plant, equipment or services Poor planning and assessment 	Catastrophic	High	High	Likely	Catastrophic	<ul style="list-style-type: none"> PCB Work Health and Safety Policy PCB Training and Competencies Policy PCB Hazard Identification, Risk Assessment and Control Procedure PCB Electrical Register PCB Isolation Permit Project WHSMP Safe Work Method Statements Code of Practice - Managing Electrical Risks in the Workplace 2015 Code of Practice - Persons working on or near energised electrical installations 2017 Code of Practice - Managing electrical risks in the workplace 2018 Code of Practice – Managing the Work Environment and Facilities 2015 Code of Practice – How to Manage Work Health and Safety Risks 2015 WA Electrical requirements – 2019 Guidance Note - Working in the vicinity of overhead and underground electric lines (Safe Work Australia 2006) AS/NZS 3000:2018 Electrical Installations-Buildings Structures and premises - AS/NZS 3012:2019 Electrical Installations - construction and demolition sites AS/NZS 4836:2011 Safe working on or near low-voltage electrical installations and equipment AS/NZS 3760 - In-service safety inspection and testing Electricity Regulations 1945 Electricity (Licensing) Regulations 1991 Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 	<ul style="list-style-type: none"> Install all electrical systems in accordance with AS3012 (temporary power supplied in accordance to). Install RCDS on all temporary power supplies Conduct regular tests/inspections on all switchboards and RCDS. Maintain PCB register of all Electrical Equipment Tag all electrical equipment to show completion of recent test/inspection. Conduct 3 monthly tests/inspections on all electrical equipment. All electrical equipment and leads to be tagged displaying the appropriate colour for the quarter. Implement process to tag "out of service" and remove all equipment failing inspection. All electrical works to be carried out by competent electricians. Never use equipment with frayed cords, damaged insulation or broken plugs. Electrical hazards include exposed energized parts and unguarded electrical equipment which may become energized unexpectedly. Such equipment always carries warning signs like "Shock Risk". Always use appropriate insulated rubber gloves and goggles while working on any branch circuit or any other electrical circuit. Implement Isolation Permit process for all work involving electrical supply. Never try repairing energized equipment. Always check that it is de-energized first by using a tester. Prevent overloading of electrical sockets/supplies Ensure all isolation and energisation tasks are subject to permit to work. Lead stands or plastic lead hooks to be used to suspend leads off the ground. Prevent accumulation of water in the vicinity of all electrical items. Wear appropriate PPE at all times. 	<ul style="list-style-type: none"> Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings. 	Medium	Catastrophic	Unlikely



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					DOCUMENTS	CONTROLS / MITIGATION MEASURES				
Overarching Hazards (continued)	Excavation	<ul style="list-style-type: none"> Contact with buried services Weakness of cohesiveness or movement of excavated soil Poorly controlled plant/pedestrian interface Loose wet or uneven soil or buried services Trench collapse Death or disabling injury to personnel 	<ul style="list-style-type: none"> Poor planning and assessment procedures Not following excavation procedures 	High				Likely	Major	High
Overarching Hazards (continued)	Excavation	<ul style="list-style-type: none"> Contact with buried services Weakness of cohesiveness or movement of excavated soil Poorly controlled plant/pedestrian interface Loose wet or uneven soil or buried services Trench collapse Death or disabling injury to personnel 	<ul style="list-style-type: none"> Poor planning and assessment procedures Not following excavation procedures 	Medium				Unlikely	Major	Medium

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							DOCUMENTS	LIKELIHOOD			
Overarching Hazards (continued)	Working at Height	<ul style="list-style-type: none"> Fall from Height >2m causing injury or death Fall from Height <2m causing injury or death Objects falling from height causing injury or death 	<ul style="list-style-type: none"> Falls from ladders/steps/work platforms Falls from plant and machinery Open / unprotected edges Inappropriately assembled mobile scaffold Exposure to fall situations in everyday work/construction activities No edge protection, exclusion zones Items stored unsafe at height Falls into trenches Inappropriate use of access and fall arrest equipment Faulty WAH equipment Unsuitable work environment 	High	Catastrophic	Medium	<ul style="list-style-type: none"> Use platform ladders only for light work of short duration. Maintain 3 points of contact at all times. No A-frame or extendable ladders to be used on site. Maintain handrails (top/mid rails) around all working platforms above 2m Open edges or penetrations to be protected and bunted off Open excavations to be battered/benchend and bunted with appropriate signage Mobile scaffold - 4m to be built and used as per manufacturer's instructions Mobile scaffold - 4m to be built by licenced scatfoder and signed off. Penetrations (hole or opening) need to be secured and boarded with clear sign 'hole beneath'. WAH methodology to be outlined and assessed in SWMS including rescue plan in place. Consider falling objects when placing them at height. All scaffolders to have kickboards installed and access ladders / stairs. Use of tool lanyards where practical. All personnel working at height to hold valid working safely at height ticket. Provide/enforce use of Elevated Working Platforms where practicable (EWP). EWP Operators to hold valid tickets or licences. EWP pre-starts and log books to be completed. Maintained at required intervals All harnesses, lanyards and accessories to be tagged, valid and good condition prior to use. Fall arrest equipment on register and inspected every 6 months officially and before use by competent person. Anchorages are maintained and inspected by competent person. All scaffolding to be inspected before use and every 30 days thereafter, with scaffold tags at access point updated accordingly. Fall prevention system meets the requirement of legislation and codes of practise Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings. 	Unlikely	Catastrophic	Medium	

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							RESIDUAL RISK RATING	RISK CONSEQUENCE				
Overarching Hazards (continued)	Plant and Vehicle	<ul style="list-style-type: none"> Damage to vehicles, equipment or property Damage to roadway Injury to personnel Vehicle Collision Death or disabling injury 	<ul style="list-style-type: none"> Poor or inadequate control and operation of plant and equipment Driving vehicles to and from work Driving fatigued Failure to anticipate movement of pedestrians and interaction with mobile plant Inexperienced or unqualified operators Loose or unstable surface. Operating near open or loose edges. Overloading of machine causing it to unbalance Failure to anticipate other vehicle movement when entering or leaving site 	High	Major	Medium	<ul style="list-style-type: none"> Confirm all drivers have valid licence for mobile plant/vehicle. Ensure personnel are trained to drive/use plant that does not require licence. Provide users with information on operation and maintenance of equipment. Implement controls to restrict plant/equipment use to trained personnel only. Vehicles maintained on a regular basis, and services are in accordance to manufacturer's instructions. All Road Safety Laws to be conformed with. Review driver/user competence on a periodic basis Complete mobile crane lift study Check that mobile crane is registered with WorkSafe if has working load greater than 10t Competence of operator verified that have applicable HRW license Mobile crane maintenance records and pre-start documentation supplied Set up exclusion zones where crane age is taking place. Review and verify that all crane related ISAs are current and accurate. Observe local and site speed limits, including Road laws Designate and sign operating area and stay within operating area. Spotters to be utilised as required. All audible and visual warning systems on plant/vehicles to be checked as part of pre-start on a daily basis Introduce traffic control conditions if required. Set up exclusion zones, signage when operating plant and machinery. Ensure notice is given to neighbouring work areas when operating plant and machinery in the vicinity. Observe existing traffic management requirements. All personnel to be made aware of traffic management plan and overtaking points Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings. 		Unlikely	Major	Medium	

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							DOCUMENTS	LIKELIHOOD			
Overarching Hazards (continued)	Hazardous Substances	<ul style="list-style-type: none"> Exposure to paints, gases, dust and/or pressurised fluids Exposed to levels above the national exposure standard Chemical spill Fire / Explosion 	<ul style="list-style-type: none"> Chemicals and substances not stored correctly Not following chemical handling procedures Poor planning and assessment Discovered during works Inappropriately used Incorrect labelling Incorrect removal methods 	High	Major	Medium	<ul style="list-style-type: none"> PCB Hazard Identification, Risk Assessment and Control Procedure PCB Personal Protective Equipment Procedure PCB Work Health and Safety Policy PCB Hazardous Substance Register PCB Hazardous Substance Risk Assessment Project WHSRMP Health monitoring guide for persons conducting businesses or undertakings Health monitoring guide for workers Code of Practice - Labelling of Workplace Hazardous Chemicals 2015 Code of Practice - Preparation of Safety Data Sheets for Hazardous Chemicals 2015 Code of Practice - How to Manage and Control Asbestos in the Workplace 2015 Code of Practice - How to Safely Remove Asbestos 2015 Code of Practice - Control of Scheduled Carcinogenic Substances [NOHSC:2014(1995)] Management and control of asbestos in workplaces [NOHSC:2018 (2005)] - Safe Work Australia Safe Removal of Asbestos [NOHSC:2002 (2005)] - Safe Work Australia Safe Work Australia (How to Safely Remove Asbestos) Code of Practice 2020 Code of Practice - Managing Risks of Hazardous Chemicals in the Workplace 2015 Control of Workplace Hazardous Substances [NOHSC:2007(1994)] - Safe Work Australia Code of Practice - Managing risks of hazardous chemicals in the workplace 2012 A1351 Hazardous Substances Register AS 4332 - The Storage and Handling of Gases in Cylinders AS1940-2005 - Storage & Handling of Flammable and Combustible Liquids Estate & Infrastructure Group Asbestos Management Plan v5.0 Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 	Likely	Medium		
				Medium	Major	Medium	<ul style="list-style-type: none"> Induction and ongoing training to all employees with the potential for exposure. All chemicals to be stored in conjunction with provided MSDS. Hazardous substance register to be made available on site along with MSDS. Review and adherence to MSDS and completion of Hazardous Substance Risk Assessment and SWMS prior to use. Suitable PPE to be provided and worn. Engineering controls to be investigated and implemented as appropriate. Extraction/ventilation to be made available if required. Air Monitoring of workplace/space & results to be recorded. Results made available to employees. Records on such hazardous substances to be readily available to employees, contractors, relevant authorities and emergency services. Management plan to be devised to manage the use of such identified hazardous substances. Labels to be maintained and referred to. Emergency information/requirements to be captured in SWMS. Health surveillance records to be maintained and recorded. All related documents to be made available to workers upon request. Follow hierarchy of controls when trying to manage a risk or hazard. Gas cylinders stored 3m away from combustible materials All gases and/or dangerous goods secured in a lockable compound with fire extinguisher and spill kit in place. Incompatible gases segregated by 3m. That is flammable (fuel) gases segregated from oxidising gases by at least 3m. Gas cylinders to be kept separate from other dangerous goods and/or combustible liquids by 5m or by fire proof barrier. Occupational Hygienist / Licensed asbestos assessor to be contacted upon the discovery of hazardous substance i.e., Lead or Asbestos. Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings. 	Unlikely	Medium		

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							LIKELIHOOD	CONSEQUENCE			
Overarching Hazards (continued)	Confined space	<ul style="list-style-type: none"> Biological hazards, such as bacteria Contaminated / Asphyxiate Atmosphere Exhaust, flammable gases Low oxygen levels Risk of engulfment by stored substances 	<ul style="list-style-type: none"> Inadequate confined space entry training Inadequate supervisor knowledge and supervision' Inappropriate confined space procedures in place 	High	Major	Medium	Likely	Major		Unlikely	Medium

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							RESIDUAL RISK RATING	RISK RATING				
Overarching Hazards (continued)	Crane operations	<ul style="list-style-type: none"> Severe injury or major site damage Severe injury to site personnel or major damage to site Working in vicinity of electrical power lines 	<ul style="list-style-type: none"> Poor or inadequate control and operation of crane Falling loads, crane collapse, crane overturning. Lifting equipment not maintained Poor planning and assessment 	High	Major	Medium	<ul style="list-style-type: none"> Confirm all drivers have valid licence for the specific type of crane being used. Confirm that Dogman/Rigger has valid licence. Check time since crane licence issued to assess experience levels. Conduct mobile lift crane study. Confirm crane adequately sized and certified for activity. Review Contractor lifting / crane operation SWMS before activity starts. Hold pre-start meeting with contractor to review activity and work plan. Confirm pre-reception, commissioning inspection completed before erection. Confirm pre-operational inspection completed before use. Confirm completion of regular inspection and testing requirements. Obtain copy of SOP for slewing cranes before use on site. Confirm effective communication in place (crane operator and dogmen). Provide adequate space to fully deploy outriggers. Confirm that required number of Dogmen are present during operation. Lifting equipment on register and inspected at required intervals (every three months) by competent persons. Confirm systems are in place to measure wind speed. Barricade area surrounding crane to prevent personnel access. Exclusion zone to be provide adequate space for safe crane operations within and provide safe clearance to the public. Appropriate signage in place during lifting procedures. Use tag lines on chains or loads to control chain swing 	<ul style="list-style-type: none"> PCB Work Health and Safety Policy PCB Training and Competencies Policy PCB Emergency Response Procedure PCB Hazard Identification, Risk Assessment and Control Procedure PCB Vehicle and Plant Register PCB Plant Pre-Start Checklist Inspection PCB Plant Pre-Mobilisation Form PCB EWP Pre-Mobilisation Form PCB Plant Risk Assessment Project WHSMP PCB Lift Permit Lift Study Code of Practice – Managing Risks of Plant in the Workplace 2015 Code of Practice – Construction Work 2015 Code of Practice – Work Health and Safety Consultation, Co-operation and Coordination 2015 Code of Practice – Managing the Work Environment and Facilities 2015 Code of Practice – How to Manage Work Health and Safety Risks 2015 AS 2550.3 - 2002 Bridge, gantry, portal (including container cranes), jib and monorail cranes AS 2550.5 - 2002 Mobile cranes AS 1418 - Cranes, Hoists and Winches AS 1353 - Flat Synthetic Webbing Slings AS 1380 - Fibre-Rope Slings AS 1438 - Wire Coil Flat slings AS 4497 - Round Slings - Synthetic Fibre AS 3775 - Chain Slings AS 1666- Wire Rope Slings Safe Work Australia – Guide for Cranes 2015 Safe Work Australia – Guide to Mobile Cranes 2015 Safe Work Australia – Guide to Inspecting and Maintaining Cranes 2015 Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 	Medium	Major	Medium	
				Low	Minor	Low						

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							LIKELIHOOD		
Overarching Hazards (continued)	Flora and Fauna interaction	Dieback contamination / spread • Exposed to ticks • Snakes/ spiders	Poorly planned approach to environmental hazards • Unaware of die back decontamination procedures	Medium	Moderate	<ul style="list-style-type: none"> Follow dieback decontamination procedures as per DMP, WHSMP and SWMS Decontamination procedures and checks to be explained and demonstrated by PCB to all contractors attending site. Do not work in rainy conditions due to the risk of spread for dieback Persons attending site to complete green card training PPE at all times for ticks, snakes and other fauna Ensure all personnel are aware of environmental hazards via site inductions and prestart meetings First aid kit and snake kit to be always readily available and accessible Identify likely poisonous snake/spider species in project area. Instruct workers NOT to move any animal/insect that is found. Contact site supervisor or project manager immediately. Confirm First Aider personnel can provide aid for snake/spider bites. 	Medium	Unlikely	Low
Manual Handling			Poorly planned activity • Examples of MH include - lifting; lowering; pulling; pushing; twisting; and, carrying. • MH injuries include - strains, sprains; neck and back injury; slips, falls and crush incidents; cuts, bruises and broken bones; hernias; and, strained heart muscles.	Medium	Moderate	<ul style="list-style-type: none"> Ensure correct lifting techniques are used and explained Complete manual handling risk assessment for all MH activities. Use mechanical means to transport heavy or awkward items. PPE to be worn when manual handling – Gloves, steel cap boots, back brace, glasses and hard hat. Team lifting encouraged i.e., 2 man lifts where possible Comply with advisory standards / COP on MH Confirm all personnel have received MH training (records) if stated. Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings. 	Medium	Unlikely	Low

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							DOCUMENTS	CONTROLS / MITIGATION MEASURES		
Overarching Hazards (continued)	Slips, Trips and Falls	<ul style="list-style-type: none"> Sprains, strains and lacerations 	<ul style="list-style-type: none"> Uneven, poorly maintained, slippery and cluttered surfaces. Poor site housekeeping. 	Moderate	Medium	Medium	<ul style="list-style-type: none"> PCB Work Health and Safety Policy PCB Injury Management Policy PCB Manual Handling Procedure PCB Signs, Barricades and Housekeeping Procedure PCB Hazard Identification, Risk Assessment and Control Procedure Project WHSMP Code of Practice – Hazardous manual tasks 2015 Code of Practice – Managing the Work Environment and Facilities 2015 Code of Practice – How to Manage Work Health and Safety Risks 2015 Code of Practice – Hazardous manual tasks 2018 Code of Practice – Manual tasks 2010 Code of Practice – Prevention of Musculoskeletal Disorders from performing Manual Tasks at Work 2010 Code of Practice - Managing the risk of falls at workplaces 2018 Slips, trips and falls fact sheet Safe Work Australia 2012 Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 	<ul style="list-style-type: none"> Maintain clear walkways and work areas at all times. Select appropriate equipment to eliminate work in restricted spaces, and kneeling and other awkward postures, e.g., use tool extensions, platforms. Ensure that all floors are level throughout work areas and there are no temporary or permanent obstructions posing any risks. Ensure good housekeeping on the premises includes removing unnecessary items and ensuring objects are put away. Footwear and floor surfaces should be non-slip. Ensure procedures such as warning signs, barriers, and immediate clean-up are in place when wet cleaning and when handling spills. Provide signage warning of cleaning and wet floors. Provide cordless equipment e.g., back pack vacuum cleaners. Store materials in locations adjacent to the work area. Ensure adequate lighting is in place for staircases, walk ways and any dark areas. Undertake regular site inspections and ensure all tool and equipment is stored away Electrical leads to be suspended off the ground. Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings. 	Low	Medium
Overarching Hazards (continued)	Exposure to Sharps	<ul style="list-style-type: none"> Laceration cause by contact with sharp metal edges 	<ul style="list-style-type: none"> Poor planning and assessment Lack of PPE 	High	Major	Major	<ul style="list-style-type: none"> PCB Work Health and Safety Policy PCB Personal Protective Equipment Procedure Hazard Identification, Risk Assessment and Control Procedure PCB Manual Handling Procedure Project WHSMP Code of Practice – Managing the Work Environment and Facilities 2015 Code of Practice – Hazardous manual tasks 2015 Code of Practice – First Aid in the workplace 2019 Code of Practice – Hazardous manual tasks 2018 Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 	<ul style="list-style-type: none"> Review tool selection for the specific activity. Review condition and requirement of job front prior to commencing task. Cut aware and use guards' where practicable. Ensure SWMS in place when handling sharp objects. PPE (Gloves) to be worn at all times when there is laceration potential. Inspect site to ensure potential to cut areas are eliminated i.e., remove protruding nails from timers etc. Long and longs to be worn on PCB sites. Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings. 	Possible	Medium

Construction Risk Analysis Workshop



PROJECT STAGE	TASK / ACTIVITY / ASPECT	HAZARDS OR ASPECTS & IMPACTS ASSOCIATED WITH THIS ACTIVITY	CAUSE	CURRENT RISK RATING	RISK CONSEQUENCE	CONTROLS / MITIGATION MEASURES	RISK RATING	CONSEQUENCE	RESIDUAL RISK RATING
							LIKELIHOOD		
Overarching Hazards (continued)	Asbestos Removal	<ul style="list-style-type: none"> Asbestos Exposure Site / Equipment Contamination 	<ul style="list-style-type: none"> Poor planning and assessment Not following removal procedures 	High	Major	<ul style="list-style-type: none"> Exclusion zone to be maintained throughout the completion of asbestos removal works. The size of the exclusion zone is to be determined by the task specific risk assessment, in consultation with the Client Erect barricading (soft and/or hard) and appropriate signage to be erected at all access points to notify all persons the presence of ACM All employees are to put on the appropriate PPE (i.e., Sundstrom half face mask with P3 filter, coveralls, appropriate type of gloves, safety glasses, safety boots, prior to entering areas where there is potential exposure to ACM (e.g., disturbed, removal works in progress) and handling and cleaning contaminated tools and equipment (e.g., vacuum cleaners, PPE) Asbestos removalists to have fit test carried out prior to works to ensure masks are of a proper fit, fit test to be repeated periodically every 12 months or if employee changes type of mask being used Air monitoring shall be conducted by an independent Occupational Hygienist (trained and accredited) and the results communicated to the relevant stakeholders, in accordance with the requirements outlined in the relevant Asbestos Removal Control Plan and related documents (e.g., relevant codes of practices) Plant and equipment not to leave work front without being appropriately decontaminated (refer to decontamination step in SWMS) "Asbestos Caution" or similar warning to be placed on wrapped/bagged ACM All disposal PPE and contaminated tools and equipment is to be treated as contaminated waste and disposed in the ACM waste bags Employees shall follow the decontamination procedure in place (i.e., industrial vacuum cleaners fitted with a HEPA filter) Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings. 	Medium	Medium	

Construction Risk Analysis Workshop



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							LIKELIHOOD		
Overarching Hazards (continued)	Simultaneous Operations	<ul style="list-style-type: none"> • Serious Injury • Equipment or Property Damage • Delays in Schedule 	<ul style="list-style-type: none"> Lack of understanding of works conducted in same area with major hazards not being identified due to non-communication of works being scheduled. 	High	Major	<ul style="list-style-type: none"> • PCB Work Health and Safety Policy • Hazard Identification, Risk Assessment and Control Procedure • Project WHSMP • Code of Practice – Managing the Work Environment and Facilities 2015 • Code of Practice – How to Manage Work Health and Safety Risks 2015 • Work Health and Safety Act 2011 • Work Health and Safety Regulations 2011 	<ul style="list-style-type: none"> • Subcontractors to attend PCB Asbestos And Demolition Restart Meetings. • PCB Asbestos And Demolition Supervisor to regularly communicate with subcontractor regarding work schedule and progress. • Subcontractors are to use PCB Asbestos And Demolition nominated UHF Channel. • Subcontractors are to actively communicate with PCB Asbestos And Demolition to negate opportunity for misunderstanding or confusion. • PCB Asbestos And Demolition management to meet with subcontractor management if work scope changes, conditions change. • PCB Asbestos And Demolition to implement SWA immediately if simultaneous operations present an unsafe work front or a hazard is observed and immediately communicate with subcontractor. • Signage to be in place including safe exclusion zones. • Send out notice of disruption to and any neighbouring buildings to be impacted by works. • Send out site notices to any neighbouring contractors performing works in the vicinity of a PCB work site. • All subcontractors are urged to implement SWA if the work front is hazardous - work as 'one-team'. • Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings. 	Medium	Medium
				Likely	Major				

Construction Risk Analysis Workshop



PROJECT STAGE	TASK / ACTIVITY / ASPECT	HAZARDS OR ASPECTS & IMPACTS ASSOCIATED WITH THIS ACTIVITY	CAUSE	CURRENT RISK RATING	CONSEQUENCE	RISK RATING	CONTROLS / MITIGATION MEASURES		CONSEQUENCE	RISK RATING
							DOCUMENTS	CONTROLS / MITIGATION MEASURES		
Overarching Hazards (continued)	Resurfacing/ Grading Roads	<ul style="list-style-type: none"> Persons struck by plant (Injury/fatality) Trip Hazards (flight variations to ground levels) Collision with Infrastructure (Damage to buildings/utilities) 	<ul style="list-style-type: none"> Failure to anticipate movement of mobile plant or pedestrian movements Contact with overhead / underground services 	High	Major	Medium	<ul style="list-style-type: none"> PCB Work Health and Safety Policy PCB Signs, Barricades and Housekeeping Procedure PCB Hazard Identification, Risk Assessment and Control Procedure PCB Vehicle and Plant Register PCB Plant Pre-Start Checklist Inspection PCB Plant Pre-Mobilisation Form Project WHSWP PCB Plant Risk Assessment Code of Practice – Managing Risks of Plant in the Workplace 2015 Code of Practice – Fatigue management for commercial vehicle drivers 2019 Code of Practice – Traffic Management for Works on Roads 2021 (Main Roads WA) Code of Practice – Plant in the workplace making it safe 2001 Guidance Note – Workplace traffic Management 2021 Guidance Note – Safe movement for vehicles at workplaces 2006 Department of Transport – Drive Safe handbook Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 	<ul style="list-style-type: none"> SWMS to be in place for all road works. Confirm all drivers have valid licence for mobile plant/vehicle. Ensure personnel are trained to drive/use plant that does not require licence. Provide users with information on operation and maintenance of equipment. Implement controls to restrict plant/equipment use to trained personnel only. Vehicles maintained on a regular basis, and services are in accordance to manufacturer's instructions. All Road Safety Laws to be conformed with. Review driver/user competence on a periodic basis Complete mobile crane lift study Check that mobile crane is registered with WorkSafe if has working load greater than 10t Competence of operator verified that have applicable HRW license Set up exclusion zones where crane age is taking place. Review and verify that all crane related JSAs are current and accurate. Observe local and site speed limits, including Road laws Designate and sign operating area and stay within operating area. Site plans to be referred to and service plans to be obtained during road works. Spotters to be utilised as required. All audible and visual warning systems on plant/vehicles to be checked as part of pre-start on a daily basis. Traffic management signs to be in place. Introduce traffic control conditions if required. Set up exclusion zones, signage when operating plant and machinery. Ensure notice is given to neighbouring work areas when road closures and operating plant and machinery in the vicinity. Observe existing traffic management requirements. Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings. 	Medium	
				Low	Minor	Low				

Construction Risk Analysis Workshop



PROJECT STAGE	TASK / ACTIVITY / ASPECT	HAZARDS OR ASPECTS & IMPACTS ASSOCIATED WITH THIS ACTIVITY	CAUSE	CURRENT RISK RATING	RISK CONSEQUENCE	CONTROLS / MITIGATION MEASURES	RISK RATING	CONSEQUENCE	RESIDUAL RISK RATING
							LIKELIHOOD		
Overarching Hazards (continued)	Isolation of Site from general public and Dealing with Trespasses	<ul style="list-style-type: none"> Construction sites create risks not only for the construction worker but also from members of the public. Site Management or other employees at risk and may incur personal injury when confronting members of the public who are trespassing on site. Slip, Trip and Falls from uneven, poorly maintained, slippery and cluttered surfaces Failure to anticipate movement of pedestrians and interaction with mobile plant A member of the public sustains physical injury or property damage as a result of site operations. 	<ul style="list-style-type: none"> A member of the public may claim damages through a civil court for injuries sustained from site access or from interaction with employees of PCB Asbestos And Demolition at a PCB Asbestos And Demolition controlled site. Clear communication processes not established Poor hazard management Reckless work on site endangering the public 	High	Major	<ul style="list-style-type: none"> Site to be fenced off and ensure entrance points can be locked. Ensure site supervisors details are displayed on site signage providing contact number. Maintain clear public ways at all times. Sign to be erected around boundary fence. Store materials in safe locations, away from public access. Introduce clear signage to warn public of construction activity. Install temporary barriers until permanent fencing is in place. Locate activities away from public access areas. Restrict public access to area during high-risk activities. Extend site barriers when activity poses risk of falling objects. 	Medium	Major	Medium
					Unlikely	<ul style="list-style-type: none"> Project WHSMP Code of Practice – Managing the Work Environment and Facilities 2015 Code of Practice – How to Manage Work Health and Safety Risks 2015 National guide for safe workplaces – COVID-19 AS 1319.1994 - Safety Signs for Occupational environments Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 			

Construction Risk Analysis Workshop



PROJECT STAGE	TASK / ACTIVITY / ASPECT	HAZARDS OR ASPECTS & IMPACTS ASSOCIATED WITH THIS ACTIVITY	CAUSE	CURRENT RISK RATING	CONSEQUENCE	RISK RATING	CONTROLS / MITIGATION MEASURES		RESIDUAL RISK RATING	CONSEQUENCE	RISK RATING
							DOCUMENTS	LIKELIHOOD			
Overarching Hazards (continued)	Weather	<ul style="list-style-type: none"> Severe injury to personnel Sunburn or dehydration leading to heat stroke or heat stress Hyperthermia Major site damage Equipment damage 	<ul style="list-style-type: none"> Contact with falling or flying objects or lightening Weather forecast not investigated Works for long periods of time in the heat, cold or strong winds. Lack of communication Equipment not secured Site left in inappropriate condition 	High	Major	Medium	<ul style="list-style-type: none"> PCB Work Health and Safety Policy PCB Hazard Identification, Risk Assessment and Control Procedure PCB Personal Protective Equipment Procedure PCB Work Health and Safety Policy Project WHSMP Code of Practice – How to Manage Work Health and Safety Risks 2015 Code of Practice - Managing the work environment and facilities 2015 Guidance Note - Exposure to solar ultraviolet radiation (UVR) 2019 Guidance Note - Managing the risks of working in heat Guidance Note - The protection of workers from the ultraviolet radiation in sunlight (Safe Work Australia 2008) Bureau of Meteorology Heatwave Knowledge Centre Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 	Likely	Medium		

Construction Risk Analysis Workshop



PROJECT STAGE	TASK / ACTIVITY / ASPECT	HAZARDS OR ASPECTS & IMPACTS ASSOCIATED WITH THIS ACTIVITY	CAUSE	CURRENT RISK RATING	CONSEQUENCE	RISK RATING	CONTROLS / MITIGATION MEASURES		RESIDUAL RISK RATING	CONSEQUENCE	RISK RATING
							DOCUMENTS				
Overarching Hazards (continued)	Site Land Clearing	<ul style="list-style-type: none"> Extended contamination area Ground water contamination Habitat destruction Injury to wildlife Flooding Disturbance of heritage site Release of airborne contaminants and particulates 	<ul style="list-style-type: none"> Poor management of contaminated land removal Excavation and ground clearing work to prepare for construction activities Driving of large machinery and vehicles Inability to identify heritage site Disturbance of ground during land clearing Vehicle movements in non-designated areas, excessive speed Release of airborne contaminants and particulates 	High	Major	Medium	<ul style="list-style-type: none"> PCB Work Health and Safety Policy PCB Hazard Identification, Risk Assessment and Control Procedure Project WHSMP Environmental Compliance Certificate (ECC) Wildlife Management and land clearing (Eosure) Noise and Vibration Management (WorkSafe WA) AS 2436-2010 Guide to noise control on construction, maintenance and demolition sites Wildlife Conservation Act 1950 Environmental Protection and Biodiversity Conservation Act 1999 Soil and Land Conservation Act 1945 Environmental Protection Act 1986 Contaminated Site Act 2003 Aboriginal Heritage Act 1972 Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 		Low	Rare	
Working in or Around (continued)	Working in remote or isolated areas	<ul style="list-style-type: none"> Physical injury or fatality Psychological injuries or mental health issues 	<ul style="list-style-type: none"> Poor reception and leading to communication failure Work separately from others or unsupervised works Delays in treating or responding to these emergencies which arise due to a lack of immediate access to first aid or emergency assistance Inadequate monitoring of rest, personal hygiene and general welfare facilities to ensure the basic health of workers 	Possible	Major	Medium	<ul style="list-style-type: none"> PCB Work Health and Safety Policy PCB Hazard Identification, Risk Assessment and Control Procedure PCB Safe work method statement Safe Work Australia: Covid-19 information: Working from home Comcare Guide to remote or isolated work 2013 Guidance about working in remote areas - Department of mines, industry regulation and safety Travelling to remote locations – Mine safety matters pamphlet Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 		Low	Major	
5. Working In or Around											

Construction Risk Analysis Workshop



PROJECT STAGE	TASK / ACTIVITY / ASPECT	HAZARDS OR ASPECTS & IMPACTS ASSOCIATED WITH THIS ACTIVITY	CAUSE	CURRENT RISK RATING	RISK CONSEQUENCE	RISK RATING	CONTROLS / MITIGATION MEASURES		CONSEQUENCE	RISK RATING
							DOCUMENTS	CONTROLS / MITIGATION MEASURES		
Working in or Around (continued)	Long distance travel	• Fatigue leading to personal injury or vehicle collision	• Fatigue from long distance travel	High	Major	Medium	<ul style="list-style-type: none"> PCB Fatigue Management Policy PCB Fitness for Work Policy Fitness For Work Procedure PCB Fatigue management plan Code of Practice - Working Hours 2006 Code of Practice - Working Hours Risk Management Guidelines 2006 Code of practice - Fatigue management for commercial vehicle drivers 2019 Travelling to remote locations – Mine safety matters pamphlet Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 	<ul style="list-style-type: none"> Site Manager and Supervisors will monitor the fitness for work of all personnel and the physical requirements of their work. All personnel will have no less than 10 hours break between shifts. When travelling by road over long distances, PCB to make sure two people travel together and can take turns driving to avoid driving fatigue. PCB to book employees into hotels or provide appropriate resting facilities. Employees to review PCB fatigue management plans and policies. Plan flexible schedules that allow time for breaks from driving and rest when and where it is most appropriate. Set schedules that do not require departures before sunrise. Ensure schedules take into account time for maintaining and servicing vehicles. Reduce work time by removing or modifying non-driving work Develop schedules in consultation with drivers. Require drivers to comply with agreed schedules rather than rush to complete the job in a shorter time. 	Unlikely	Medium
Working in or Around (continued)	Works Adjacent to Roads or Railways	• Motor vehicle traffic and moving trains	• Traffic management plan not prepared	High	Major	Medium	<ul style="list-style-type: none"> PCB Work Health and Safety Policy PCB Hazard Identification, Risk Assessment and Control Procedure PCB Signs, Barricades and Housekeeping Procedure Project WHSMP Safe Work Australia – Traffic management: Guide for construction work 2021 Guidance Note - Workplace traffic management 2021 Perth Transport Authority - Safe working Rules and Procedures 9100-000-007 AS 1319.1994 - Safety signs for Occupational environments Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 	<ul style="list-style-type: none"> Traffic controller to be in place if required, and appropriately trained and competent. Traffic management plan to be in place and consulted with all employees. Ensure appropriate signage is in place and visible to traffic and pedestrians. Traffic controller to be in place if required, and appropriately trained and competent. Clearly marked alternative safe laneways shall be made available for pedestrians. Use vehicle warning devices (e.g., flashing lights, vehicle signage, vehicle frequently stopping). For planned and responsive work contact the Railway Authority before work commences. Do not commence work until permission is granted from the controlling authority. All work must conform to the controlling Authority's guidelines. Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings. 	Unlikely	Medium
Working in or Around (continued)		• Collision leading to serious injury or fatality	• Signage not correctly installed	High	Major	Medium				

Construction Risk Analysis Workshop



PROJECT STAGE	TASK / ACTIVITY / ASPECT	HAZARDS OR ASPECTS & IMPACTS ASSOCIATED WITH THIS ACTIVITY	CAUSE	CURRENT RISK RATING	CONSEQUENCE	RISK RATING	RESIDUAL RISK RATING	CONSEQUENCE	RISK RATING
						DOCUMENTS			
Working in or Around (continued)	Poorly Ventilated areas	<ul style="list-style-type: none"> Low oxygen levels Elevated levels of carbon dioxide Increased exposure to legionella Pollutants released from off-gassing and emissions Mould Uncomfortable humidity and temperature 	<ul style="list-style-type: none"> Inadequate confined space entry training Inadequate supervisor knowledge and supervision' Inappropriate confined space procedures in place 	High	Major	<ul style="list-style-type: none"> PCB Work Health and Safety Policy PCB Hazardous Substance Risk PCB Hazard Identification, Risk Assessment and Control Procedure PCB Emergency Response Procedure PCB Personal Protective Equipment Procedure PCB Confined Space permit Code of Practice – Confined spaces 2015 PCB Safe work method statement Project WHSMP Code of Practice – How to Manage Work Health and Safety Risks 2015 Code of Practice - Managing the work environment and facilities 2015 AS 2885-2009 Confined spaces Work Health and Safety Act 2011 Work Health and Safety Regulations 2011 	Medium	<ul style="list-style-type: none"> If person entering confined space has completed confined space training. Buddy system at all times with clear communication established Ensure appropriate PPE is being worn at all times Emergency procedure made known and is understood. Regulate air flow, by providing a way of controlling the air flow into and out of the building or workplace. Service and maintain ventilation systems. Use an inspection checklist to determine any areas of concern with indoor air quality. The checklist may contain items such as ensuring walls, ceilings and floors are free of mould, check for sources of pollution, making sure humidifiers and air conditioners are working, etc Minimum "safe level" of oxygen in a confined space is 19.5%, while the maximum "safe level" of oxygen in a confined space is 23.5%. With low oxygen levels being the biggest cause of death in confined spaces, accurate oxygen level measurements are essential. The atmosphere within a confined space must be tested using equipment that is designed to detect the chemicals that may be present at levels that are well below the defined exposure limits. Site rules, expectations and standards to be communicated via site inductions, tool box meetings and prestart meetings. 	Medium
				Likeley					

Construction Risk Analysis Workshop

RISK RATING MATRIX		Consequence					Impact				
Likelihood	Consequence	1. Insignificant	2. Minor	3. Moderate	4. Major	5. Catastrophic	Impact	Consequence	Impact	Consequence	Impact
1.	Rare	Very Low	Very Low	Low	Medium	High	Low	Medium	Medium	High	Critical
2.	Unlikely	Very Low	Low	Medium	High	Critical	Medium	Medium	Medium	High	Critical
3.	Possible	Low	Low	Medium	High	Critical	Medium	Medium	Medium	High	Critical
4.	Likely	Low	Medium	High	Critical	Critical	High	High	High	High	Critical
5.	Almost Certain	Medium	Medium	High	Critical	Critical	High	High	High	High	Critical
LIKELIHOOD		CONSEQUENCE					CONSEQUENCE				
1	Insignificant	Minor Injury					Minor Injury				
2	Minor	Lost Time Injury (LTI) or Medically Treated Injury (MTI) <10 days					Lost Time Injury (LTI) or Medically Treated Injury (MTI) <10 days				
3	Moderate	Lost Time Injury (LTI) or Medically Treated Injury (MTI) >10 days					Lost Time Injury (LTI) or Medically Treated Injury (MTI) >10 days				
4	Major	Permanent disability or Multiple Recordable Injuries					Permanent disability or Multiple Recordable Injuries				
5	Catastrophic	Fatality					Fatality				
RISK RESPONSE RATING		Proceed with Care					Proceed with Care				
	Very Low	Have not heard of event happening					Heard of this occurring (at least every 10 years)				
	Low	Event will occur every 5 years					Event will occur every 3 years				
	Medium	Event will occur every year					Event will occur once a year				
	High	DO NOT PROCEED. Further controls measures must be put in place to reduce residual risk					DO NOT PROCEED. Further controls measures must be put in place to reduce residual risk				



APPENDIX B – WESTEN ECOLOGICAL REPORT

[Link to Western Ecological Flora and Fauna Report](#)



APPENDIX C – GRAVEL SUPPLIER DOCUMENTATION

To satisfy the requirements of the SOP we advise the following:

- Hall All obtain its gravel from naturally occurring rock within the Bindoon Hill Gravel Quarry. It is estimated that 2000 m³ of gravel may be required to resurface the roads.
- The Bindoon Hill site at 7117 Great Northern Highway is a laterite gravel mine, operating at the time of inspection. The site is on a former farm but is surrounded by Jarrah/Banksia woodland, particularly to the east and north. The outer perimeter of the site was inspected. There was no evidence of die-back in the surrounding bushland, with Jarrah, Grasstrees and Stirlingia and Adenanthes (all sensitive to die-back) all appearing healthy and intact.
- Bindoon Hill Gravel Quarry undertakes routine dieback testing of its quarry products certificates from the 2022 testing are provided below. The testing provides more reliable results and the confidence in the dieback status of the quarry products supplied to customers. No dieback positive reports have been received to date.
- Bindoon Hill Gravel Quarry is subject to rigorous assessment processes by government regulators. Management plans are prepared by independent qualified experts to the satisfaction of government regulators in accordance with recognised published standards, guidelines and risk-based principles.
- The transportation of quarry products is undertaken in accordance with all regulatory requirements and the advice of independent qualified experts. In accordance with the ISO 14001 standard, Hall All employs a risk-based approach to the transportation of quarry products. The trucks go through wheel washers prior to leaving the site and the quarry.
- The delivery trucks to be used for the project are Hall All Contracting and PCB owned trucks. The same trucks are used on turnaround from the quarry and do not attend other sites between loads.



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CLIENT:	Hall-All	DATE TESTED:	18/03-29/03/2022
TEST REQUEST:	<i>Phytophthora cinnamomi</i> Assay	REPORT NO:	2022_0234
CLIENT SAMPLE ID:	Bindoon 1		
	Sampled - 15/03/2022		
LAB SAMPLE ID:	2022_0234		
DATE RECEIVED:	16/03/2022		

***Phytophthora cinnamomi* Assay**

Triplicate sterilised beakers were prepared for the sample, with 1 part sample to 4 parts deionised water. Fresh Banksia leaves were surface-sterilised and five sections were floated in each beaker. After seven days, the leaves were removed, rinsed with DI water and plated onto PCNB agar, which allows for growth of *Phytophthora*, but suppresses most other fungal growth. After four days, the colonies grown were examined under a dissecting microscope. For this sample, the fungal growth was not consistent with *Phytophthora cinnamomi*. Therefore we conclude that there is no evidence of *Phytophthora cinnamomi* in the submitted sample. Please note: It cannot be concluded that an entire site or an entire stockpile of basic raw material is dieback-free from a single or small number of samples where *Phytophthora* was not detected.

Tested by: HF

Results Approved by: PK

Report Reviewed by: SM

Reported by: HF

Date: 29/03/2022

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CLIENT:	Hall-All	DATE TESTED:	18/03-29/03/2022
TEST REQUEST:	<i>Phytophthora cinnamomi</i> Assay	REPORT NO:	2022_0235
CLIENT SAMPLE ID:	Bindoon 2		
	Sampled - 15/03/2022		
LAB SAMPLE ID:	2022_0235		
DATE RECEIVED:	16/03/2022		

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SITE INVESTIGATION REPORT

15th March 2022

Bindoon Hill Gravel Supply

Background:

Bindoon Hill Gravel supply is a supplier of laterite gravel products. The quarry is located North of Perth.

The **Bindoon Hill** site at 7117 Great Northern Highway is a laterite gravel mine, operating at the time of inspection. The site is on a former farm but is surrounded by Jarrah/Banksia woodland, particularly to the east and north. The outer perimeter of the site was inspected. There was no evidence of die-back in the surrounding bushland, with Jarrah, Grasstrees and *Stirlingia* and *Adenanthes* (all sensitive to die-back) all appearing healthy and intact.

Samples of gravel were collected from near the top of the extraction face at the north and east of the mine. Samples were subject to laboratory analysis using a standard baiting assay. No phytophthora was detected.

Peter Keating. B.Sc(Hons) Ph.D.
Managing Director

APPENDIX D – PLANT SUPPLIER BENARA NURSERY

- Benara Nurseries was established in 1963 and is a Western Australian family owned and managed company, with 4 generations actively involved in the nursery. Combined, the owners have over 200 years of experience in producing plants for the horticultural industry. Today Benara Nurseries employs over 350 staff, including 44 key staff that have been with the company for more than 10 years.
- Having grown for the Oil Mallee association and Carbon Conscious over the last 15 years, it has given Benara great knowledge and experience to allow them to grow strong, healthy seedlings. The seedlings are grown in a tray designed for native trees which promotes a strong and healthy root system. The trays are grown on benches to allow air flow and good hygiene. Programs are set up for insecticide, fungicide and fertiliser treatments.
- Any necessary revegetation would occur just prior to Autumn/ Winter rains to give the plants the best chance of survival.

https://www.benaranurseries.com/reveg?aw_stock=1&australian_native=384

INDUSTRY STANDARDS

Benara Nurseries are accredited to Nursery and Garden Industry standards. This regularly audited scheme recognises that Benara Nurseries is operating under the 'best practice guidelines on farm management'

