

PBS Design Risk Register



Word Colour Legend	Acronym	Responsible Positions	Hierarchy of Control	Control Selections
Permits	SS	Sub-Contractor Supervisor	6. Elimination	%Controls ≥ Engineering 91%
Refer to another activity in the PRR	SM	Site Manager	5. Substitution	%Controls < Engineering 9%
Input required by the site team	FM	Foreman	4. Isolation	66 126 18 1
Reference to PBS document	CA	Contracts Administrator	3. Engineering	
NSW requirement only	EHSQ	EHSQ Co-Ordinator / Manager	2. Administration	
Workplace Location:		PE/SE	Project Engineer / Site Engineer	1. PPE

6. Check formulas in L2-L7 if you add rows to ensure range is correct

Delete Legislation / Codes not applicable to your jurisdiction

Activity Description	Hazard / Impact (Worst Credible Consequence)	Likelihood	Consequence	Risk Rating	Mandatory Control Measures	Site Specific Control Measures	Hierarchy of Control (Highest Level Control)	Responsible	Status	Legal and other requirements
Abseiling outside structure perimeter	Fall of Person	B Likely	4 Large	16	Potential wind conditions must be assessed as suitable for works to commence and be continually monitored by supervisor. Engineering certification of all anchor points to be confirmed. Qualified person to confirm suitability of rope support, protection and positioning. Emergency procedure to be referenced in HR SWMS. Harness work permit to be issued. Exclusion zone to be in place with signage at drop point.		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, Managing the risk of fall COP, PBS Safety Guide
Abseiling outside structure perimeter	Hit by Falling Objects	C Possible	3 Medium	9	Physical barriers to be in place as an exclusion zone to prevent access underneath the work area and must take into consideration the arc, fall and bounce of materials and tools. Signage to be installed. Tools to be on lanyards. Authorised person only to be in direct workzone.	Traffic Control in place for public areas. Materials to be hoisted down on lanyards.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, Managing the risk of fall COP, PBS Safety Guide
Air - Conditioning	Fall of Person	C Possible	3 Medium	9	Platform ladders or EWP's are to be used in the first instance. Work trestles a minimum width of 450mm can be used. Step Ladders may only be used for minor works which take less than 15 minutes to complete and 3 points of contact must be maintained. Delivery drivers or workers are NOT to access the back of trucks unless: *There is a handrail system incorporated onto the back of the vehicle or, *A portable handrail system is provided by the project and, *The use of a portable loading bay platform would be the ideal control measure. When one or more of these controls are implemented, workers may use the access ladder and maintain 3 points of contact when ascending or descending. Ladders to be stepped back from any edges of a building/balconies at least 3m or 1:1 ratio if a full perimeter screen/scaffold has been installed.	Ticketed Personnel required for operation of EWP. Harness to be worn and connected prior to bucket being raised. Harness to be inspected daily before use and maintained as per manufacturer specifications. Mobile scaffold to be used. Any mobile scaffold over 4m needs to be erected by a ticketed scaffolder.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Air - Conditioning	Fire/Explosion	D Unlikely	3 Medium	6	Hot Works Permit to be in place. Area to be clear of combustible materials. Correct PPE to be worn. Flash back arrestors connected to all oxy sets.	225mm Grinder Permit to be in place	3. Engineering	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Welding processes COP
Air - Conditioning	Hit by Moving Plant	C Possible	4 Large	12	No one is to approach plant unless confirmation has been received by the operator that it is ok to approach. All plant to have flashing beacons operating. Mobile phones not to be used when operating plant and equipment. Operator to be appropriately Trained / Ticketed.	Exclusion zone to be in place to prevent unauthorised entry to work area. Access ways to be redirected to ensure no personnel inside operating areas. Outriggers of crane to be protected by jersey kurbs or similar to prevent contact from other plant/vehicles. Use Tag Lines when appropriate to control light weight &/or large panel lifts in windy conditions. Dogman and Operator to sign into Crane Management Sub Plan. Spotter/Dogman to have positive communication with operator (via hand signals, whistle or UHF radio) at all times. Seat belts to be worn at all times where fitted. Refer to mobile crane operations activity in this PRR	4. Isolation	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP
Air - Conditioning	Cuts and Lacerations	C Possible	2 Small	6	All guards to be fitted to power tools. Wear gloves when working with sharp steel edges. Eye Protection to be worn when cutting metalwork.	225mm grinder permit to be issued when applicable	3. Engineering	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Air - Conditioning	Plant Failure	D Unlikely	3 Medium	6	All duct lifters and portable type hoists must have a breaking system so that in the event of a hoisting wire failure the load cannot fall. In addition, outriggers where fitted must be used. SWL must be clearly marked & only propriety attachments are used and only in accordance with manufacturers instructions.		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP

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			Refer to another activity in the PRR	SM	Site Manager	5. Substitution	6	%Controls < Engineering	9%	
			Input required by the site team	FM	Foreman	4. Isolation	66			
Workplace Location:			Reference to PBS document	CA	Contracts Administrator	3. Engineering	126	⚠️Check formulas in L2-L7 if you add rows to ensure range is correct		
Issue Number:			NSW requirement only	EHSQ	EHSQ Co-Ordinator / Manager	2. Administration	18			
Issue Date:				PE/SE	Project Engineer / Site Engineer	1. PPE	1			
Activity Description	Hazard / Impact (Worst Credible Consequence)	Likelihood	Consequence	Risk Rating	Mandatory Control Measures	Site Specific Control Measures	Hierarchy of Control (Highest Level Control)	Responsible	Status	Legal and other requirements
Air - Conditioning	Hit by Falling Objects	D Unlikely	4 Large	8	Authorised person only to be in direct workzone.	Tools to be on lanyards when working above 2m fall risk. Physical barriers to be in place as an exclusion zone and must take into consideration the arc, fall and bounce of materials and tools. Area to be bunted off with signage to prevent unauthorised access.	4. Isolation	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
All Trades	Electric Shock	B Likely	3 Medium	12	Electrical equipment to be tested and tagged by competent person minimum 3 monthly. RCD's to be tested by a qualified person monthly and trip times to be recorded and given to PBS. Lead stands or insulated hooks must be used to elevate leads above head height.		3. Engineering	SS/SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing electrical risks in the workplace
All Trades	Manual Handling Injury	C Possible	3 Medium	9	Ensure load is close to the chest and bend the knees to pick up the load. Lift with legs keeping back straight. Bend the knees to lower the load then release the load to final position without over extending the back. Contractor to ensure all workers are inducted into the trade specific safe working procedures for manual handling. (eg subcontractor WHS Plan, Training Register.)	Use Mechanical Aids. Team Lifts to occur.	3. Engineering	SS/SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Hazardous manual tasks COP.
Asbestos Removal	Exposure to Hazardous Dust	A Almost Certain	3 Medium	15	Asbestos Register for relevant building to be requested from Client. Asbestos Removal Control Plan to be in place. Workers and Subcontractor must hold the correct class of licence for the type of asbestos identified to be removed (i.e. over 10m2). Health Monitoring to be done for all workers involved in the task prior to works commencing. Physical barriers to be set up around asbestos removal area with signage. Correct PPE to be worn. Enter Restricted Areas work permit to be issued. HR SWMS to outline methodology for controlling all asbestos dust and loose particles Hold Point - Clearance Certificate to be received prior to any other works occurring.	Surveillance air monitoring to be done by competent person and results to be entered into monitor register. Asbestos Sub Plan to be developed to outline further controls. Notify Regulator in writing at least 5 days before commencing activity if over the 10m2 or friable.	6. Elimination	SS / SM / FM / SE / CA	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, How to safely remove asbestos COP
Asbestos Removal	PPE, Tools and Waste Contamination	B Likely	3 Medium	12	Waste to be sealed in a container and labelled in accordance with the Globally Harmonised System of Classification and labelling to indicate it contains asbestos. Waste must be brought to an Licenced waste disposal facility which accepts asbestos waste. PBS to be given evidence of correct disposal at facility (i.e Tipping Dockets)	PPE and Tools must be sealed in containers / double bagged or appropriately decontaminated within the asbestos removal area.	4. Isolation	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Labelling of workplace hazardous chemicals COP, How to safely remove asbestos COP
Asbestos Removal	Fall of Person	A Almost Certain	3 Medium	15	Platform ladders to be used or mobile scaffold(s). EWP may be utilized where applicable.		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Asbestos Removal	Unexpected Find	D Unlikely	3 Medium	6	PBS Unexpected Finds protocol to be followed. Contractor to include unexpected finds protocol in their HR SWMS.	Asbestos Register to be updated to include unexpected finding.	2. Administration	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Concrete Coring	Fall of Person	B Likely	4 Large	16	Platform ladders or EWPs are to be used in the first instance. Work trestles a minimum width of 450mm can be used. Step Ladders may only be used for minor works which take less than 15 minutes to complete and 3 points of contact must be maintained. Ladders to be stepped back from any edges of a building/balconies at least 3m or 1:1 ratio if a full perimeter screen/scaffold has been installed.	Catch deck to be installed underneath area being cored.	3. Engineering	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide

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Concrete Coring	Hit by Falling Objects	A Almost Certain	3 Medium	15	Concrete Coring Work Permit to be issued. Physical barriers to be in place as an exclusion zone and must take into consideration the arc, fall and bounce of materials and tools underneath the area being cored. Area to be bunted off with signage to prevent unauthorised access. Authorised person only to be in direct workzone.		4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Concrete Coring	Dust Inhalation	A Almost Certain	2 Small	10	Internal Risk - P1/P2/P3 dust mask to be worn. External Risk - Constant Hosing down with water to be undertaken.	Use of Fans for internal risk. Power tools to have vacuum /water attachments	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing risks of hazardous chemicals in the workplace COP
Concrete Coring	Contact with Live Existing Services	B Likely	4 Large	16	Concrete Coring Work Permit to be issued. If services located in direct coring zone then additional Energisation/Isolation Permit to be issued and completed. Visual inspection to be conducted for under slab services.		3. Engineering	SS / SM / FM / SE / CA	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing electrical risk in the workplace COP
Concrete Placement	Environmental Contamination from Spill of Hazardous Chemicals/Substances	C Possible	2 Small	6	Designated washout / recycling areas for concrete and concrete equipment with regular monitoring.		4. Isolation	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing risks of hazardous chemicals in the workplace COP
Concrete Placement	Failure of Structure	C Possible	5 Very Large	15	Structural Engineer Certification to be received prior to pour for formwork deck. Hold Point - PBS pre pour checklist to be conducted prior to pour of deck commences. Level underneath formwork deck being poured to be closed off and only restricted access allowed (i.e Formwork spotter)	Securing requirements, load points, bracing and fixing details must be verified to be in accordance with an approved design and include suitable structural fixings that account for wind load considerations based on locality. All safety pins to be installed in pipe couplings. Cleaning of concrete line to be done by either blowing back into hopper and using a concrete tray, blowing into a secure and engineered device made for this purpose or into a waste bin lined with plastic which has an engineered lid. HOLD POINT: No concrete blow out on a formwork deck to occur unless in an area marked and propped for point loading by the formworker.	4. Isolation	SS / SM / FM / SE / CA	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Safe Design of Structures COP
Concrete Placement	Exposure to Hazardous Material	C Possible	2 Small	6	Correct PPE to be worn. SDS to be communicated to all workers involved in the task via TBT, training register or SWMS. Hazardous Materials to be stored in designated storage area immediately after use.	Hazardous Materials and Dangerous Goods sub plan to be in place. Dust mask to be worn when cutting/grinding/drilling into concrete. Vacuum attachment and /or water to be used to mitigate dust where possible.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing risks of hazardous chemicals in the workplace COP
Concrete Placement	Fall of Person	B Likely	4 Large	16	Fall Protection must be in place and all reo bars are capped prior to commencing.	Suitable work platforms must be in place for pouring at height.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Concrete Placement	Fatigue	C Possible	2 Small	6	Rotate work crews. Monitor number of workers and hours worked. Contractors to provide ways home for workers that may be too fatigued to drive home. Site to have designated rest areas. Min 10hr break between shifts.	Contractor to provide fatigue management plan.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide

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Activity Description	Hazard / Impact (Worst Credible Consequence)	Likelihood	Consequence	Risk Rating	Mandatory Control Measures	Site Specific Control Measures	Hierarchy of Control (Highest Level Control)	Responsible	Status	Legal and other requirements
Concrete Placement	Hit by Falling Objects	B Likely	3 Medium	12	A system must be in place to alert workers of changed boom position. Concreters not to collect any loads by crane. Dogman to land loads i.e helicopters etc. Authorised person only to be in direct workzone.	Documented check to confirm suitable barrier in place with no gaps in containment screens / scaffold to prevent concrete slurry falling to ground.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Concrete Placement	Working in Cold, Inclement or Windy Weather	C Possible	2 Small	6	Heated amenities to be provided. Suitable Access / Egress to be provided to work areas. Concrete Placing Boom not to work outside the manufacturer's recommendations regards extreme weather (wind speed) If lightning is present in the near sky or immediate sky above then concrete booms must be lowered and persons to remain under cover in lunch sheds until the weather passes.	Inspection to be conducted prior to gates of site open by PBS Site Manager/ EHS Committee to assess all access routes. Any unsuitable work areas are to be barricaded off with physical barrier until deemed safe to enter.	4. Isolation	SS / SM / HSR	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the work environment and facilities COP
Concrete Placement	Working in High Temperatures - Heat Stress/Heat Exhaustion	C Possible	2 Small	6	Sufficient quantities of cool drinking water is readily available close to work areas. Regularly rotate workers who perform more strenuous activities with less demanding tasks. Take regular work breaks in cooler areas such as air conditioned sheds.	Shade Covers to be installed. Workers to wear broad brimmed hats and sunglasses for UV protection.	3. Engineering	SS / SM / HSR	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the work environment and facilities COP
Concrete Placement	Dust Inhalation	C Possible	2 Small	6	Internal Risk - P1/P2/P3 dust mask to be worn. External Risk - Constant Hosing down with water to be undertaken.	Use of Fans for internal risk. Power tools to have vacuum attachments	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing risks of hazardous chemicals in the workplace COP
Concrete Pump	Plant Over-Turning	C Possible	4 Large	12	Set up in an area that is approved by PBS Site Manager. Plant is not to set up or traverse within the zone of influence of a service trench/ excavation or on a service trench. Outriggers must be set up on stable ground. Licenced operators to operate boom/satellite pumps only.	Penetration covers to be physically secured with signage and be of sufficient strength to support likely plant or equipment in the area. If sizable penetration, load & point limits to be displayed. Compaction test is required prior to set up of outriggers on disturbed soil. Outriggers of crane to be protected by jersey kurbs or similar to prevent contact from other plant/vehicles.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP
Concrete Pump	Plant Failure	C Possible	4 Large	12	Ensure safety pins are installed to line connectors. Monthly pipe thickness tests to be conducted and checked to ensure minimum density allowance is not exceeded. Servicing and maintenance to be done as per manufacturer's specifications		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP
Concrete Pump	Hit by Moving Plant	B Likely	4 Large	16	Linesman to have positive communication with pump operator when positioning the line. Pump operator to have full sight of where concrete boom is being positioned.	Line Pump stands to be used on deck and for static lines on the ground.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP
Concrete Pump	Environmental Contamination from Spill of Hazardous Chemicals/Substances	C Possible	2 Small	6			4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing risks of hazardous chemicals in the workplace COP
Concrete Pump	Working in Cold, Inclement or Windy Weather	C Possible	1 Very Small	3	Heated amenities to be provided. Suitable Access / Egress to be provided to work areas. Concrete Placing Boom not to work outside the manufacturer's recommendations regards extreme weather (wind speed) If lightning is present in the near sky or immediate sky above then concrete booms must be lowered and persons to remain under cover in lunch sheds until the weather passes.	Inspection to be conducted prior to gates of site open by PBS Site Manager/ EHS Committee to assess all access routes. Any unsuitable work areas are to be barricaded off with physical barrier until deemed safe to enter.	4. Isolation	SS / SM / HSR	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the work environment and facilities COP

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Concrete Pump	Working in High Temperatures - Heat Stress/Heat Exhaustion	C Possible	1 Very Small	3	Sufficient quantities of cool drinking water is readily available close to work areas. Regularly rotate workers who perform more strenuous activities with less demanding tasks. Take regular work breaks in cooler areas such as air conditioned sheds.	Shade Covers to be installed. Workers to wear broad brimmed hats and sunglasses for UV protection.	3. Engineering	SS / SM / HSR	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the work environment and facilities COP
Conditions of Consent	EHS Issues identified in DA not being addressed	B Likely	3 Medium	12	Project Manager to ensure all DA conditions are managed.		2. Administration	PM / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Confined Space	Fall of Person	B Likely	4 Large	16	Suitable access must be provided into confined space which does not expose the personnel to a risk of fall.	3 points of contact to be maintained when using ladder. Physical barrier to be installed 2m back from the edge of excavation. Storing box to be used to provide access and control the risk of fall with handrails and midrails.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Confined spaces COP, Managing the risk of falls at the workplace COP
Confined Space	Engulfment / Asphyxiation	B Likely	4 Large	16	Confined Space Entry Permit to be issued. Personnel entering confined space & observer both to hold evidence of confined space training. Positive communication to be maintained at all times (i.e UHF radios). Bump test to be conducted on detector to confirm calibration and working order. The confined space then needs to be tested prior to any persons entering the space. Gas Detection to be conducted whilst worker inside confined space. Emergency Procedure to be documented in HR SWMS for the retrieval of injured person.	Breathing apparatus (P3) to be worn. No hot works to be conducted within the space.	3. Engineering	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Confined spaces COP
Covid - 19	Spread of Infection - Workers	B Likely	4 Large	16	All sites to provide hand sanitiser and ensure soap dispensers are maintained in amenities. Shaking of hands should not occur. Posters to be added around sites to demonstrate proper hand washing techniques and 'stop the spread' messages. All workers are required to wash their hands often, use hand sanitiser as needed, cover their mouth when coughing or sneezing but not using their hands to do so, avoid contact with others and seek medical assistance if feeling unwell.		4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Covid - 19	Spread of Infection - Cleaning	B Likely	4 Large	16	Removal of germs such as the virus that causes COVID-19 requires thorough cleaning followed by disinfection. Site Offices and Amenities are to be cleaned thoroughly daily by professional cleaners.		4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Government Guidelines
Crane - lifted work boxes	Hit by Falling Objects	A Almost Certain	4 Large	20	All work boxes must be design registered with Relevant Authority. Workbox must be securely attached to crane hook. Directions to crane operator should only be provided from work box by licensed dogger / rigger. Authorised person only to be in direct workzone.	1st Aid crane box should be clearly identified with First Aid signage displayed & only used to retrieve injured persons. 1st Aid crane box may have outward opening doors but these doors must be self - closing with automatic latches.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Crane - lifted work boxes	Fall of Person	B Likely	4 Large	16	Full body fall - arrest harnesses to be worn at all times (except when using 1st aid crane box) & be attached to work box anchor points or to crane main sling ring above heads of workers. Emergency retrieval arrangements to be in place before lift commences.	1st Aid crane box may have outward opening doors but these doors must be self - closing with automatic latches.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Crane - lifted work boxes	Plant Failure	C Possible	4 Large	12	All work boxes must be design registered with Relevant Authority. Workbox must be securely attached to crane hook. Emergency retrieval arrangements to be in place before lift commences		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP

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Issue Date:				PE/SE	Project Engineer / Site Engineer	1. PPE	1			
Activity Description	Hazard / Impact (Worst Credible Consequence)	Likelihood	Consequence	Risk Rating	Mandatory Control Measures	Site Specific Control Measures	Hierarchy of Control (Highest Level Control)	Responsible	Status	Legal and other requirements
Demolition	Dust Inhalation	C Possible	3 Medium	9	Correct PPE to be worn by workers during the removal process. All potential ACM and Hazardous Material to be removed and clearance certificate received from licenced assessor prior to demolition.	Asbestos Register to be requested off of the client. Competent person to inspect residential premises prior to demolition. Licenced person to conduct destructive testing and provide results prior to demolition.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Demolition	Fall of Person	C Possible	4 Large	12	Site specific controls to be implemented in HR SWMS.	Catch scaffold to be erected. Minimum height of 900mm of fall protection from outer wall to remain for workers on suspended slab. EWP to be used.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Demolition	Uncontrolled Collapse of Structure	C Possible	3 Medium	9	Demolition Plan to be developed outlining sequence of demolition. Where applicable, any structural engineers sign-offs needs to be obtained. Physical Barriers to be in place as an exclusion zone to prevent unauthorised access. "Demolition in progress" signage to be installed. Only licenced contractors to perform works.	If structure is over 6m in height then PBS to notify Regulator in writing at least 5 days before commencing works.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Demolition COP
Demolition	Hit by Falling Objects	C Possible	3 Medium	9	Demolition Plan to be developed. Physical Barriers to be in place as an exclusion zone to prevent unauthorised access and must take the arc, bounce and deflection of materials into consideration. "Demolition in progress" signage to be installed. Authorised person only to be in direct workzone. All lifting gear is to be maintained as per manufacturer specifications and inspected daily by a competent person - Synthetic slings are to be checked 3 monthly and documented on a register. Chains are to be tested yearly and documented on a register. The SWL of lifting equipment is not to be exceeded. Weight of load to be lifted to be predetermined by a qualified person and marked on load. Selection of sling & slinging techniques for load is predetermined by a competent person. Lifting points are to be predetermined by a competent person and marked on the load. Load is lifted within the view of the operator at all times. Burst protection is to be fitted on all earthmoving plant used as a crane, where the rated capacity exceeds 1 tonne. The burst protection is to be fitted to both the boom and dipper arm of the plant. Standard lifting procedures must be documented within HR SWMS. Authorised person only to be in direct workzone.	Tools to be on lanyards when working above 2m fall risk. B Class Hoarding installation for public protection. Scaffold to be installed by a licenced scaffolder.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Demolition Work COP.
Demolition	Contact with Live Existing Services	A Almost Certain	4 Large	20	PBS Isolation/Energisation Permit to be used. An Excavation Permit may also be needed. Any live services that remain inside PBS fence line above grade are to be identified using robust barricading and signage. DBYD to be reviewed by PBS and provided to Demolition Contractor. In ground services are to be visually marked.	As built to be received from the client to confirm existing services. Evidence and As Built drawings from client to identify any live and disconnected services within the project boundaries. Service Locator to be engaged to conduct survey of site and provide to PBS.	6. Elimination	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing electrical risk in the workplace COP, Demolition Work COP
Demolition	Contact with Overhead Power Lines	B Likely	4 Large	16	No unloading / loading of trucks to happen in the vicinity of these powerlines. All plant to remain at a minimum approach distances to powerlines. Up to 132,000 volts = 3m. 132,000 - 330,000 volts = 6m. Above 330,000 = 8m.	Tiger Tails to be installed by relevant authority as a visual reminder. Install height/location indicators. Non conductive barrier to be installed between building/plant and power lines. Competent Spotter to have positive communication with plant (UHF radios) and observe plant movements when design envelope has the potential to reach closer than 3 metres to power lines. Install signage as visual reminder.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Demolition Work COP, Managing the risks of plant in the workplace COP, Managing electrical risks in the workplace COP
Demolition	Environmental Contamination from Spill of Hazardous Chemicals/Substances	C Possible	2 Small	6	Contractor to provide, and have readily available access to, a spill kit which is appropriately sized for the risk of spill when refuelling or if damage was to occur to a piece of plant and equipment. Workers must be trained in the use of spill kits and the SDS's for chemicals/substances that they are using on this project.		2. Administration	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing risks of hazardous chemicals in the workplace COP
Demolition	Dust Inhalation	C Possible	3 Medium	9	Internal Risk - P1/P2/P3 dust mask to be worn. External Risk - Constant Hosing down with water to be undertaken.	Use of Fans for internal risk.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing risks of hazardous chemicals in the workplace COP

PBS Design Risk Register



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			Input required by the site team	FM	Foreman	4. Isolation	66			
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Demolition	Cuts and Lacerations	C Possible	1 Very Small	3	All guards to be fitted to power tools. Gloves to be worn at all times when handling materials.	225mm grinder permit to be issued when applicable	3. Engineering	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Demolition	Works affect neighbouring structures	C Possible	2 Small	6	Dilatation survey to be undertaken by consultant. Prior to works starting	Vibration Monitoring to be in place. Noise monitoring to be in place. Letter box drop to occur in neighbouring properties that might be affected by works.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Demolition	Destruction of Heritage Structures or Aboriginal relics or places	D Unlikely	2 Small	4	Heritage Management Sub Plan to be in Place. All heritage listed areas are to be barricaded off and/or signage displayed.		4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Demolition	Noise	D Unlikely	3 Medium	6	Hearing Protection to be worn.	Mufflers to be used on plant. Noise and vibration monitoring required	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Demolition	Hit by Moving Plant	B Likely	4 Large	16	When using an excavator - Spotter to have positive communication with operator (via hand signals or UHF radio) at all times. No one is allowed in the swing zone of the piece of plant. No one is to approach plant unless the bucket/arm has been lowered and confirmation has been received by the operator that it is ok to approach. All plant to have flashing beacons operating. Mobile phones not to be used when operating plant and equipment. Fully automatic quick hitch required for excavators, where this cannot be accomplished and a semi automatic or other quick hitch is proposed, a written exemption is required from EHS Manager.	Exclusion zone to be in place to prevent unauthorised entry to work area.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP
Design Analysis Review	Incorrect or incomplete design analysis and hazard identification	C Possible	4 Large	12	Review all consultant Design Safety Reports using PBS Design Safety Report Review Document. Analysis to be conducted in accordance with EHS Plan and Quality Sub Plan.		3. Engineering	SS / PM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, Safe Design of Structures COP, PBS Safety Guide
Electrical	Fall of Person	C Possible	4 Large	12	Platform ladders or EWP's are to be used in the first instance. Work trestles a minimum width of 450mm can be used. Step Ladders may only be used for minor works which take less than 15 minutes to complete and 3 points of contact must be maintained. Delivery drivers or workers are NOT to access the back of trucks unless: *There is a handrail system incorporated onto the back of the vehicle or, *A portable handrail system is provided by the project and; *The use of a portable loading bay platform would be the ideal control measure. When one or more of these controls are implemented, workers may use the access ladder and maintain 3 points of contact when ascending or descending. Ladders to be stepped back from any edges of a building/balconies at least 3m or 1:1 ratio if a full perimeter screen/scaffold has been installed.	Competent person to only use EWP below 11m. Ticketed Personnel required for operation of EWP over 11m. Harness to be worn and connected to boom EWP type prior to bucket being raised. Harness to be inspected daily before use and maintained as per manufacturer specifications. Mobile scaffold to be used. Any mobile scaffold over 4m needs to be erected by a ticketed scaffolder.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Electrical	Electrocution	A Almost Certain	4 Large	20	Install RCD protected temporary boards at each level in nominated location being hand wired with 4mm cable (i.e no spider / wander boards allowed). Temporary boards must be physically secured to prevent overturn of board and front covers must be lockable. Temporary boards must have locked covers over circuit - breakers and RCDs associated with outgoing circuits apart from the main switch/isolating switch which must be readily accessible in the event of an emergency. Temp Boards must have signage installed on the front cover. Lock out/Tag out system to be used when isolation of electrical feed required. Isolation / Energisation Permit to be issued. Live temporary electrical cabling must be identified with yellow tag tape every 3m, where cabling is accessible. Competent Persons must carry out electrical inspection, testing and tagging of leads 3 monthly and a Qualified person must test RCD's monthly. All temporary electricity provided to socket (general purpose) outlets must be protected by a Residual Current Device. Each Temporary Board & all construction wiring installations must have a completed copy of ACT CSES/ NSW CCEW / QLD CTC provided to PBS following each energisation. Electrical apprentices and trade assistants must work under the supervision of a licenced electrician at all times. All electrical work (other than inspection and testing of portable equipment) must be carried out by a licenced electrician & each electrician must verify their licence before they commence electrical works. Calibration of all testing equipment must be carried out as per manufacturers instructions. Cordless tools are encouraged to be used before power tools. Every cable end (i.e. awaiting termination) must be folded over itself and taped to prevent eye damage and electric shock (in the event of inadvertent energisation). RCD Trip Times to be recorded monthly on a register. HR SWMS to include emergency procedure.	Permanent House Distribution Boards displayed power supplier / Authority compliance labels which allow power connection area a higher control level confirming 'test and tag' requirements. Permanent House Distribution Boards must be fitted with mechanical protection to prevent leads being damaged before use by contractors.	4. Isolation	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing electrical risks in the workplace COP

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Electrical	Hit by Falling Objects	B Likely	3 Medium	12	Authorised person only to be in direct workzone. Authorised person only to be in direct workzone.	Tools to be on lanyards when working above 2m fall risk. Physical barriers to be in place as an exclusion zone and must take into consideration the arc, fall and bounce of materials and tools. Area to be bunted off with signage to prevent unauthorised access.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Electrical	Hit by Moving Plant	C Possible	4 Large	12	No one is to approach plant unless confirmation has been received by the operator that it is ok to approach. All plant to have flashing beacons operating. Mobile phones not to be used when operating plant and equipment. Operator to be appropriately Trained / Ticketed.	Exclusion zone to be in place to prevent unauthorised entry to work area. Access ways to be redirected to ensure no personnel inside operating areas. Outriggers of crane to be protected by jersey kurbs or similar to prevent contact from other plant/vehicles. Use Tag Lines when appropriate to control light weight &/or large panel lifts in windy conditions. Dogman and Operator to sign into Crane Management Sub Plan. Spotter/Dogman to have positive communication with operator (via hand signals, whistle or UHF radio) at all times. Seat belts to be worn at all times where fitted. Refer to mobile crane operations activity and excavation activity in this PRR.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP
Electrical	Cuts and Lacerations	C Possible	2 Small	6	All guards to be fitted to power tools. All PPE requirements shall be assessed in the contractors HR SWMS	225mm grinder permit to be issued when applicable	3. Engineering	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Electrical	Fire/Explosion	B Likely	3 Medium	12	Hot Works Permit to be in place Or Isolation / Energisation Permit to be in place. Area to be clear of combustible materials. Correct PPE to be worn.	225mm Grinder Permit to be in place	2. Administration	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Welding processes COP
Electrical	Exposure to Hazardous Material	C Possible	2 Small	6	Correct PPE to be worn. SDS to be communicated to all workers involved in the task via TBT, training register or SWMS. Hazardous Materials to be stored in designated storage area immediately after use.	Hazardous Materials and Dangerous Goods sub plan to be in place.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing risks of hazardous chemicals in the workplace COP
Emergency Planning	Emergency Risk Assessment	A Almost Certain	5 Very Large	21+	Fire extinguisher to be located at every exit point and/or every 500 square metres. Nurse Call point and/or air horn to be located every 500 square metres. Spill Kits to be located at all designated refuelling areas and hazardous chemicals / dangerous goods storage areas. Contractors are to provide their own spill kit relevant for their own, refuelling or other, activities.	PBS will have a multipurpose 20 litre spill kit available as a back up. 1 fire extinguisher (to suit class a,b,c & electrical fire) on each storey adjacent to each exit or temporary stairway at all times. After building reaches 12m effective height, required fire hydrants & fire hose reels must be operational every storey (except the 2 uppermost floors). Emergency Evacuation Map to be installed on every level / at each exit point. Defibrillator is available in the retirement resort next to the project site.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the work environment and facilities COP, First aid in the workplace COP
Environmental Assessment	Excessive exposure to surrounding noise, dust, vibration, radiation	C Possible	2 Small	6		Dust / Noise / Vibration monitoring processes are deemed required for this project. Monitoring processes are to be conducted by suitably competent consultants (eg occupational hygienist) in accordance with contractual requirements &/or workplace exposure standards for airborne contaminants. Background surveys to be conducted prior to site works commencing.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the work environment and facilities COP
Environmental Assessment	Environmental Contamination from Spill of Hazardous Chemicals/Substances / Water	B Likely	4 Large	16	Install approved controls prior to commencing excavation works. Contractors to ensure all erosion & sediment controls are fully re-instated before leaving site. Monitor external site boundaries and environmental controls using "EHS Site Assessment Checklist".	environmental controls relating to drains, boundary fencing etc. need to be captured here	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP
Excavation	Noise	D Unlikely	3 Medium	6	Hearing Protection to be worn.	Mufflers to be used on plant. Noise and vibration monitoring required	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Excavation	Exposure to Hazardous Dust	C Possible	3 Medium	9	Unexpected finds protocol to be followed if unknown. If Known, and less than 10m2 PBS to engage an asbestos removalist and monitor tracking of waste to certified waste treatment plant. If Asbestos waste is over 10m2 then relevant authorities shall be notified and an Asbestos removalist shall be engaged. Any health monitoring shall be conducted as per the advice of the Asbestos removalist occupation hygienist. Test holes of soil conditions to be completed by consultant and results provided to PBS. All PPE requirements are to be worn i.e Masks, jump suits. Decontamination of any exposed clothing/PPE shall be undertaken before leaving the effected area.	Contaminated areas to be bunted off using physical barriers and signage installed. Plastic to be installed over contaminated areas to prevent risk of dust arising until removal process is initiated. All workers to hold asbestos awareness training.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide

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Issue Date:				PE/SE	Project Engineer / Site Engineer	1. PPE	1			
Activity Description	Hazard / Impact (Worst Credible Consequence)	Likelihood	Consequence	Risk Rating	Mandatory Control Measures	Site Specific Control Measures	Hierarchy of Control (Highest Level Control)	Responsible	Status	Legal and other requirements
Excavation	Contact with In-Ground Services	A Almost Certain	4 Large	20	Excavation Permit required when penetrating the ground 200mm or more. DBVD to be reviewed. Known services are to be identified and Summary Of Services Location Plan (SOS LP) to be updated on weekly basis including services that are being installed progressively by service trades. Digging by mechanical means is not to be carried out within 1m of a known live service unless EHSQ Manager has been consulted	As built to be received from the client to confirm existing services. Service Locator to be engaged to conduct survey of site and provide to PBS. Pot Holing via sucker truck/hand digging every 5m to determine direction of service. , Energise/Isolate Permit may also be required.	3. Engineering	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Excavation COP, Managing electrical risks in the workplace
Excavation	Collapse of Excavation / Trenching	A Almost Certain	4 Large	20	Excavation Permit required when penetrating the ground 200mm or more. Excavation / Trench must be either benched; battered; shored or a combination of all if deeper than 1.5m; otherwise proceed as per Geotech report requirements. Any amendments outside geotech report must be signed off by relevant qualified engineer prior to works occurring. Physical Barrier to be installed along top of excavation / trench to prevent plant / vehicles entering the zone of influence. Any spoil must not be stored within zone of influence and must be stored on down slope side. For all excavations > 2m deep, structural design issues to be discussed & recorded on Design Meeting Minutes. Structural Engineer to document (i.e detailed drawing/s &/or notations) excavation methods in accordance with Geotech Report Requirements. Approved processes are implemented / installed by competent persons in accordance with engineer's documentation. Changes to designed &/or installed systems can only be acted after authorised / signed off by relevant qualified engineer. Obtain Geotechnical report if applicable with documented daily checks of excavation stability by contractor supervisor when >2m deep / high & provided to PBS.	Shoring Boxes to provide suitable access in/out of excavation. Adjacent structures, roads and footpaths must be supported or protected to prevent collapse.	4. Isolation	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Excavation	Fall of Person	B Likely	4 Large	16	Visual barrier to be installed minimum of 2m back from edge of excavation or Physical edge protection installed if closer than 2m to edge. Suitable access to be provided to excavation that does not expose workers to risk of fall. "Deep Excavation" signage to be installed around edge of excavation where deeper than 1.5m		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Excavation	Hit by Moving Plant	B Likely	4 Large	16	When using an excavator - Spotter to have positive communication with operator (via hand signals or UHF radio) at all times. No one is allowed in the swing zone of the piece of plant. No one is to approach plant unless the bucket/arm has been lowered and confirmation has been received by the operator that it is ok to approach. All plant to have flashing beacons operating. Mobile phones not to be used when operating plant and equipment. Fully automatic quick hitch required for excavators, where this cannot be accomplished and a semi automatic or other quick hitch is proposed, a written exemption is required from EHS Manager.	Exclusion zone to be in place to prevent unauthorised entry to work area.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP
Excavation	Hit by Falling Objects	C Possible	3 Medium	9	Any spoil must be stored at least 1m back from edge and on down slope side. All lifting gear is to be maintained as per manufacturer specifications and inspected daily by a competent person - Synthetic slings are to be checked 3 monthly and documented on a register. Chains are to be tested yearly and documented on a register. The SWL of lifting equipment is not to be exceeded. Weight of load to be lifted to be predetermined by a qualified person and marked on load. Selection of sling & slinging techniques for load is predetermined by a competent person. Lifting points are to be predetermined by a competent person and marked on the load. Load is lifted within the view of the operator at all times. Burst protection is to be fitted on all earthmoving plant used as a crane, where the rated capacity exceeds 1 tonne. The burst protection is to be fitted to both the boom and dipper arm of the plant. Standard lifting procedures must be documented within HR SWMS. Authorised person only to be in direct workzone.	Physical Barriers to be in place around edge of excavation to prevent the fall of materials / tools into excavation. Tools and materials must be stored at least 1m back from edge of excavation which is deeper than 1.2m deep.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Excavation COP
Excavation	Plant Over-Turning	C Possible	4 Large	12	ROPS/FOPS to be installed on all plant involved in the work activity. Physical Barrier to be installed along top of excavation / trench to prevent plant / vehicles entering the zone of influence. The SWL of plant and its attachments is not to be exceeded. Seat Belts to be worn where fitted.	Penetration covers to be physically secured with signage and be of sufficient strength to support likely plant or equipment in the area. If sizable penetration, load & point limits to be displayed.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP, Excavation COP
Excavation	Fire/Explosion when refuelling plant and equipment	C Possible	3 Medium	9	Hazardous Materials to be stored in designated storage area immediately after use. Fire Fighting equipment to have tag in date of 6 months and be readily accessible to the refuelling area. Refuelling area to be clear of any combustible material.	Designated refuelling area to be identified with signage on site. Hazardous Chemicals and Dangerous Goods Management Sub Plan to be in place.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing risks of hazardous chemicals in the workplace COP
Excavation	Environmental Contamination from Spill of Hazardous Chemicals/Substances	C Possible	2 Small	6	Contractor to provide, and have readily available access to, a spill kit which is appropriately sized for the risk of spill when refuelling or if damage was to occur to a piece of plant and equipment. Workers must be trained in the use of spill kits and the SDS's for chemicals/substances that they are using on this project.		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing risks of hazardous chemicals in the workplace COP

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Activity Description	Hazard / Impact (Worst Credible Consequence)	Likelihood	Consequence	Risk Rating	Mandatory Control Measures	Site Specific Control Measures	Hierarchy of Control (Highest Level Control)	Responsible	Status	Legal and other requirements
Excavation	Working In High Temperatures - Heat Stress/Heat Exhaustion	C Possible	2 Small	6	Sufficient quantities of cool drinking water is readily available close to work areas. Regularly rotate workers who perform more strenuous activities with less demanding tasks. Take regular work breaks in cooler areas such as air conditioned sheds.	Shade Covers to be installed @ designated smoking areas. Workers to wear broad brimmed hats and sunglasses for UV protection.	3. Engineering	SS / SM / HSR	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the work environment and facilities COP
Excavation	Working in Cold, Inclement or Windy Weather	C Possible	2 Small	6	Heated amenities to be provided. Suitable Access / Egress to be provided to work areas. If lightning is present in the near sky or immediate sky above then concrete booms must be lowered and persons to remain under cover in lunch sheds until the weather passes.	Inspection to be conducted prior to gates of site open by PBS Site Manager/ EHS Committee to assess all access routes. Any unsuitable work areas are to be barricaded off with physical barrier until deemed safe to enter.	3. Engineering	SS / SM / HSR	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the work environment and facilities COP
Excavation	Works affect neighbouring structures	C Possible	3 Medium	9	Dilapidation survey to be undertaken by consultant. Prior to works starting	Vibration Monitoring to be in place. Noise monitoring to be in place. Letter box drop to occur in neighbouring properties that might be affected by works.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Excavation	Unexpected Find	C Possible	2 Small	6	PBS Unexpected Finds protocol to be followed. Contractor to include unexpected finds protocol in their HR SWMS.		2. Administration	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Excavation	Damage to protected flora or fauna	C Possible	2 Small	6	Tree Protection zones using robust barricading to be in place with signage.	Timber batten protection to be placed directly onto the tree trunks in High Pedestrian traffic areas (I.e. public locations in the street near PBS hoardings)	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Fencing	Contact with In-Ground Services	B Likely	4 Large	16	Excavation Permit required when penetrating the ground 200mm or more. DBYD to be reviewed. Known services are to be identified and Summary Of Services Location Plan (SOSLP) to be updated on weekly basis including services that are being installed progressively by service trades. Digging by mechanical means is not to be carried out within 1m of a known live service unless EHSQ Manager has been consulted	As built to be received from the client to confirm existing services. Service Locator to be engaged to conduct survey of site and provide to PBS. Pot Holing via sucker truck/hand digging every 5m to determine direction of service. . Energise/Isolate Permit may also be required.	3. Engineering	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Excavation COP, Managing electrical risks in the workplace
Fencing	Hit by Falling Objects	C Possible	3 Medium	9	No unsecured components to be left outside PBS fence line.	Semi - Permanent Fencing to be installed. Temporary Fencing to be erected in accordance with AS4687 requirements. Handover to be received from contractor that installs fence to confirm installation to Australian standards and manufacturer requirements. For any section of perimeter fencing taken over from client by pbs, a temporary perimeter fence handover certificate must be completed and provided to pbs. If temporary perimeter fencing being used on site - it must be installed to D - Grade wind loading if closer than 4m to a public footpath or roadway. Additional bracing required to be installed	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide

PBS Design Risk Register



		Word Colour Legend		Acronym	Responsible Positions	Hierarchy of Control		Control Selections		
			Permits	SS	Sub-Contractor Supervisor	6. Elimination	2	%Controls ≥ Engineering	91%	
			Refer to another activity in the PRR	SM	Site Manager	5. Substitution	6	%Controls < Engineering	9%	
			Input required by the site team	FM	Foreman	4. Isolation	66			
Workplace Location:			Reference to PBS document	CA	Contracts Administrator	3. Engineering	126	⚠️Check formulas in L2-L7 if you add rows to ensure range is correct		
Issue Number:			NSW requirement only	EHSQ	EHSQ Co-Ordinator / Manager	2. Administration	18			
Issue Date:				PE/SE	Project Engineer / Site Engineer	1. PPE	1			
									Delete Legislation / Codes not applicable to your jurisdiction	
Activity Description	Hazard / Impact (Worst Credible Consequence)	Likelihood	Consequence	Risk Rating	Mandatory Control Measures	Site Specific Control Measures	Hierarchy of Control (Highest Level Control)	Responsible	Status	Legal and other requirements
Fencing	Hitting Objects with part of body	C Possible	3 Medium	9	No unsecured components to be left outside PBS fence line. No fence component to protrude onto public accessways in a manner that obstructs or is hazardous to general public. Bracing to have counterweights above base post or have palement cap installed.		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Fencing	Manual Handling Injury				2 person job when rearranging / reinstating fence panels (eg lifting panels out of bases). Mechanical aids to be used when lifting multiple panels at one time.		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Fencing	Fire/Explosion	D Unlikely	2 Small	4	Hot Works Permit to be in place. Area to be clear of combustible materials. Correct PPE to be worn.	225mm Grinder Permit to be in place	3. Engineering	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Welding processes COP
Fire Services	Fall of Person	D Unlikely	4 Large	8	Platform ladders or EWP's are to be used in the first instance. Work trees a minimum width of 450mm can be used. Step Ladders may only be used for minor works which take less than 15 minutes to complete and 3 points of contact must be maintained. Delivery drivers or workers are NOT to access the back of trucks unless: *There is a handrail system incorporated onto the back of the vehicle or, *A portable handrail system is provided by the project and, *The use of a portable loading bay platform would be the ideal control measure. When one or more of these controls are implemented, workers may use the access ladder and maintain 3 points of contact when ascending or descending. Ladders to be stepped back from any edges of a building/balconies at least 3m or 1:1 ratio if a full perimeter screen/scaffold has been installed.	Ticketed Personnel required for operation of EWP. Harness to be worn and connected prior to bucket being raised. Harness to be inspected daily before use and maintained as per manufacturer specifications. Mobile scaffold to be used. Any mobile scaffold over 4m needs to be erected by a ticketed scaffolder.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Fire Services	Fire/Explosion	B Likely	3 Medium	12	Hot Works Permit to be in place. Area to be clear of combustible materials. Correct PPE to be worn. Flash back arrestors to be on all oxy acetylene sets. Isolation/Energisation Permit to be issued.	225mm Grinder Permit to be in place	3. Engineering	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Welding processes COP
Fire Services	Hit by Moving Plant	D Unlikely	3 Medium	6	No one is to approach plant unless confirmation has been received by the operator that it is ok to approach. All plant to have flashing beacons operating. Mobile phones not to be used when operating plant and equipment. Operator to be appropriately Trained / Ticketed.	Exclusion zone to be in place to prevent unauthorised entry to work area. Access ways to be redirected to ensure no personnel inside operating areas. Outriggers of crane to be protected by jersey kurbs or similar to prevent contact from other plant/vehicles. Use Tag Lines when appropriate to control light weight &/or large panel lifts in windy conditions. Dogman and Operator to sign into Crane Management Sub Plan. Spotter/Dogman to have positive communication with operator (via hand signals, whistle or UHF radio) at all times. Seat belts to be worn at all times where fitted. Refer to mobile crane operations activity in this PRR. Refer to mobile crane operations activity in this PRR.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP
Fire Services	Cuts and Lacerations	D Unlikely	1 Very Small	2	All guards to be fitted to power tools. Wear gloves when working with sharp steel edges. Eye Protection to be worn when using explosive power tool. No high velocity/direct action Explosive Power Tool to be used on site unless approved by PBS Site Manager and the controls required are communicated to workers via a toolbox. Explosive Powered Tool charges must be stored in a locked metal box marked "explosives". Used charges must be disposed of immediately after use.	225mm grinder permit to be issued when applicable	5. Substitution	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Fire Services	Exposure to Hazardous Material	D Unlikely	2 Small	4	Correct PPE to be worn. SDS to be communicated to all workers involved in the task via TBT, training register or SWMS. Hazardous Materials to be stored in designated storage area immediately after use.	Hazardous Materials and Dangerous Goods sub plan to be in place.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing risks of hazardous chemicals in the workplace COP
Fire Services	Noise	C Possible	2 Small	6	Hearing Protection to be worn.	Signage to be in place when using Explosive Power Tools.	2. Administration	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing noise and preventing hearing loss at the work COP

PBS Design Risk Register



Word Colour Legend	Acronym	Responsible Positions	Hierarchy of Control	Control Selections
Permits	SS	Sub-Contractor Supervisor	6. Elimination	%Controls ≥ Engineering 91%
Refer to another activity in the PRR	SM	Site Manager	5. Substitution	%Controls < Engineering 9%
Input required by the site team	FM	Foreman	4. Isolation	66 126 18 1
Reference to PBS document	CA	Contracts Administrator	3. Engineering	
NSW requirement only	EHSQ	EHSQ Co-Ordinator / Manager	2. Administration	
	PE/SE	Project Engineer / Site Engineer	1. PPE	1

6Check formulas in L2-L7 if you add rows to ensure range is correct

Delete Legislation / Codes not applicable to your jurisdiction

Activity Description	Hazard / Impact (Worst Credible Consequence)	Likelihood	Consequence	Risk Rating	Mandatory Control Measures	Site Specific Control Measures	Hierarchy of Control (Highest Level Control)	Responsible	Status	Legal and other requirements
Floor Sealing &/or Floor and Wall Tiling	Exposure to Hazardous Material	B Likely	3 Medium	12	Isolate and ventilate the area as applicable by SDS. Obtain and adhere to risk based assessment of SDS requirements for all products brought to site.		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Floor Sealing &/or Floor and Wall Tiling	Environmental Contamination from Spill of Hazardous Chemicals/Substances	E Rare	3 Medium	3	Use designated washout facilities.		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Floor Sealing &/or Floor and Wall Tiling	Exposure to Hazardous Dust	E Rare	4 Large	4	Ensure adequate ventilation to work areas. Workers to wear suitable PPE including dust mask and eye protection.		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Floor Sealing &/or Floor and Wall Tiling	Fall of Person	D Unlikely	4 Large	8	Use scaffold / EWP or platform ladders. Do not work on ladders next to open windows, balustrades or other unprotected fall areas.		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Formwork	Fall of Person	A Almost Certain	4 Large	20	Cast/Embed 20 X 20 Galvanised Safety mesh into all service penetrations. Fixed cover to be on all penetrations over 125mm diameter. All penetration covers to be identified similar to "Danger Penetration Below". If sizeable penetrations are located in areas where plant &/or equipment is likely to be used (eg scissor lift, pallet trolley, forklift), secured covers to be of sufficient strength with load & point load limits displayed. Platform Ladder or work platforms of 450mm minimum width to be used. Physical barrier and signage must be in place to prevent unauthorised personnel from entering restricted area when working on leading edges (i.e formworkers only).	No one is to stand on truck tray unless it has hand rails in place. Minimum of 1.8m lazy joists to surround formworkers working on leading edges at all times. Dingo/AFS to have extra 1m in length ordered and to be erected and braced prior to suspended deck so it can act as a hand rail. Two access ways to be clearly defined under deck and free of all obstructions / slip, trip hazards at all times. Crash deck to be installed under all leading edges.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Formwork	Hit by Falling Objects	A Almost Certain	3 Medium	15	Exclusion zone to be erected, which still maintains an access point underneath the deck, when working on leading edges or a risk of materials/tools falling over 2 metres exists. This exclusion zone must take into consideration the arc, fall and bounce of materials & tools. Stripping areas must have barriers and signage in place to prevent unauthorised access. Authorised person only to be in direct workzone.	Structural engineer to provide documented authorisation for all formwork shutter lifting lugs.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Formwork	Failure of Structure	B Likely	5 Very Large	20	Structural engineer to provide documented authorisation prior to concrete pour & stripping. Engineer to include in drawing or provide written instruction where all load points are on deck. Where material is designed to an international or another standard, engineer must certify that it conforms to relevant Australian standard. Evidence verifying formwork sheets conform to Australian Standards must be kept on site. Provide Formwork Documentation in accordance with Section 2.4 of AS3610.1-2010. Hold Point - PBS pre-pour checklist to be completed prior to pouring any decks.	Formwork framing to be protected against impact from moving plant & equipment.	3. Engineering	SS / SM / FM / SE / CA	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Safe Design of Structures COP
Formwork	Cuts and Lacerations	B Likely	3 Medium	12	All guards to be fitted to power tools. Wear gloves when working with sharp steel edges.	Frames and timbers are not to obstruct access ways, temporary power boards or emergency exits. 225mm grinder permit to be issued when applicable	3. Engineering	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Formwork	Hit by Moving Plant	D Unlikely	3 Medium	6	No one is to approach plant unless confirmation has been received by the operator that it is ok to approach. All plant to have flashing beacons operating. Mobile phones not to be used when operating plant and equipment. Operator to be appropriately Trained / Ticketed.	Exclusion zone to be in place to prevent unauthorised entry to work area. Access ways to be redirected to ensure no personnel inside crane operating areas. Outriggers of crane to be protected by jersey kerbs or similar to prevent contact from other plant/vehicles. Use Tag Lines when appropriate to control light weight &/or large panel lifts in windy conditions. Dogman and Operator to sign into Crane Management Sub Plan. Spotter/Dogman to have positive communication with operator (via hand signals, whistle or UHF radio) at all times. Refer to mobile crane operations activity in this PRR.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP

PBS Design Risk Register



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			Permits	SS	Sub-Contractor Supervisor	6. Elimination	2	%Controls ≥ Engineering	91%	
			Refer to another activity in the PRR	SM	Site Manager	5. Substitution	6	%Controls < Engineering	9%	Delete Legislation / Codes not applicable to your jurisdiction
			Input required by the site team	FM	Foreman	4. Isolation	66	6Check formulas in L2-L7 if you add rows to ensure range is correct		
Workplace Location:			Reference to PBS document	CA	Contracts Administrator	3. Engineering	126			
Issue Number:			NSW requirement only	EHSQ	EHSQ Co-Ordinator / Manager	2. Administration	18			
Issue Date:				PE/SE	Project Engineer / Site Engineer	1. PPE	1			
Activity Description	Hazard / Impact (Worst Credible Consequence)	Likelihood	Consequence	Risk Rating	Mandatory Control Measures	Site Specific Control Measures	Hierarchy of Control (Highest Level Control)	Responsible	Status	Legal and other requirements
Frames and Trusses	Fall of Person	A Almost Certain	4 Large	20	Platform Ladders or EWP to be used in the first instance. Work trestles of minimum 450mm width can be used. Step Ladders may only be used for minor works which take less than 15 minutes to complete and 3 points of contact must be maintained. Ensure framing packs are stable & stacked at a workable height. Upper floor level are not to be accessed until edge protection and stair void protection are installed and handover certificate has been received and displayed. Suitable access must be provided to upper levels which ensures there is no exposure to worker of risk of fall (swing gate/hatch at top of ladder or similar). All openings from which a person can fall must be adequately protected (such as window and door	Ceiling joists and upper level joists must be installed from the floor underneath. The laying of floor sheets should begin adjacent to an internal or external access point which provides initial fall protection for workers. Laying of sheets should then proceed using a methodology outlined in the HR SWMS which prevents workers from falling over the edge. Unpacking of trusses must be undertaken off of a suitable work platform from the level underneath. Fall Protection must be in place on Party Wall side prior to works commencing on party wall. When trusses are erected at up to 600 mm centres, persons working between the trusses to fix or brace them can	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Frames and Trusses	Failure of Structure	D Unlikely	4 Large	8	Ensure all standing frames are suitably braced to prevent potential falling frames. If truss spacing is more than 900mm fix longitudinal bracing as each truss is being stood.		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Safe Design of Structures COP
Frames and Trusses	Hit by Falling Objects	B Likely	3 Medium	12	Authorised person only to be in direct workzone.	Tools to be on lanyards when working above 2m fall risk. Physical barriers to be in place as an exclusion zone and must take into consideration the arc, fall and bounce of materials and tools. Area to be bunted off with signage to prevent unauthorised access.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Frames and Trusses	Hit by Moving Plant	C Possible	4 Large	12	No one is to approach plant unless confirmation has been received by the operator that it is ok to approach. All plant to have flashing beacons operating. Mobile phones not to be used when operating plant and equipment. Operator to be appropriately Trained / Ticketed.	Exclusion zone to be in place to prevent unauthorised entry to work area. Access ways to be redirected to ensure no personnel inside operating areas. Outriggers of crane to be protected by jersey kurbs or similar to prevent contact from other plant/vehicles. Use Tag Lines when appropriate to control light weight &/or large panel lifts in windy conditions. Dogman and Operator to sign into Crane Management Sub Plan. Spotter/Dogman to have positive communication with operator (via hand signals, whistle or UHF radio) at all times. Seat belts to be worn at all times where fitted. Refer to mobile crane operations activity in this PRR	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP
Frames and Trusses	Cuts and Lacerations	C Possible	2 Small	6	All guards to be fitted to power tools. Wear gloves when working with sharp steel edges. Eye Protection to be worn when using explosive power tool. No high velocity/direct action Explosive Power Tool to be used on site unless approved by PBS Site Manager and the controls required are communicated to workers via a toolbox. Explosive Powered Tool charges must be stored in a locked metal box marked "explosives". Used charges must be disposed of immediately after use.	225mm grinder permit to be issued when applicable	5. Substitution	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Frames and Trusses	Noise	C Possible	2 Small	6	Hearing Protection to be worn.	Signage to be in place when using Explosive Power Tools.	2. Administration	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing noise and preventing hearing loss at the work COP
Hebel Installation	Exposure to Hazardous Dust	B Likely	3 Medium	12	Designated cutting area with signage to be installed. Minimum P2 mask, safety glasses and hearing protection to be worn when cutting hebel. Vacuum attachment to be used on saw. Only workers directly involved in the activity to be in the area when cutting being undertaken.	Cutting area separation screens to be installed.	4. Isolation	SS/SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing risks of hazardous chemicals in the workplace COP
Hebel Installation	Cuts and Lacerations	C Possible	3 Medium	9	All guards to be fitted to power tools. Wear gloves when working with sharp steel edges. Eye Protection to be worn when using explosive power tool. No high velocity/direct action Explosive Power Tool to be used on site unless approved by PBS Site Manager and the controls required are communicated to workers via a toolbox. Explosive Powered Tool charges must be stored in a locked metal box marked "explosives". Used charges must be disposed of immediately after use.		3. Engineering	SS/SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Heritage Buildings & Aboriginal Heritage	Damage to Heritage Structure	B Likely	4 Large	16	Ensure work processes reflect DA requirements or conditions. Physically identify, fence & displaysuitable signage for any nominated heritage areas. Include heritage items / control requirements in site induction training. If any heritage items uncovered during construction works, immediately stop activity & report finding to PBS Site Manager.		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide

PBS Design Risk Register



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Permits		SS	Sub-Contractor Supervisor	6. Elimination	2	%Controls ≥ Engineering	91%
Refer to another activity in the PRR		SM	Site Manager	5. Substitution	6	%Controls < Engineering	9%
Input required by the site team		FM	Foreman	4. Isolation	66	⚠️ Check formulas in L2-L7 if you add rows to ensure range is correct	
Reference to PBS document		CA	Contracts Administrator	3. Engineering	126		
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Workplace Location:				1. PPE	1	🗑️ Delete Legislation / Codes not applicable to your jurisdiction	
Issue Number:							
Issue Date:							

Activity Description	Hazard / Impact (Worst Credible Consequence)	Likelihood	Consequence	Risk Rating	Mandatory Control Measures	Site Specific Control Measures	Hierarchy of Control (Highest Level Control)	Responsible	Status	Legal and other requirements
Heritage Buildings & Aboriginal Heritage	Unexpected Find	E Rare	3 Medium	3	If any heritage & / or aboriginal items uncovered during construction works, immediately stop activity & report finding to PBS Site Manager. Isolate / barricade surrounding area & display "NO ENTRY" signage. Develop, document & train all relevant site workers in agreed process after EPA approval obtained.		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Hoarding	Hit by Falling Objects	C Possible	4 Large	12	All lifting gear is to be maintained as per manufacturer specifications and inspected daily by a competent person - Synthetic slings are to be checked 3 monthly and documented on a register. Chains are to be tested yearly and documented on a register. The SWL of lifting equipment is not to be exceeded. Weight of load to be lifted to be predetermined by a competent person and marked on load. Selection of sling & slinging techniques for load is predetermined by a competent person. Lifting points are to be predetermined by a competent person and marked on the load. Standard lifting procedures must be documented within HR SWMS. Install Hoarding as detailed on Hoarding Plan (showing dimensions and location on site). Authorised person only to be in direct workzone.	Exclusion zone to be in place to prevent unauthorised entry to work area. Footpath to be closed off and traffic control in place to re route pedestrians as per Traffic Control Plan	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Hoarding	Fall of Person	B Likely	4 Large	16	Platform Ladders to be used. Delivery drivers or workers are NOT to access the back of trucks unless: *There is a handrail system incorporated onto the back of the vehicle or, *A portable handrail system is provided by the project and, *The use of a portable loading bay platform would be the ideal control measure. When one or more of these controls are implemented, workers may use the access ladder and maintain 3 points of contact when ascending or descending.	Use of Harness Work Permit to be issued. Harness to be inspected daily before use and maintained as per manufacturer specifications. Person with working at heights ticket to conduct works involving use of harness only.	3. Engineering	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Hoarding	Hit by Moving Vehicular Traffic	C Possible	4 Large	12	Consultant holding correct tickets to provide Traffic Management Plan (including Traffic Control Plan) which is specific to the works on site. Signage and Devices to be set up in accordance with approved Traffic Control Plan by workers who hold the correct tickets. Traffic Controllers to position themselves where an escape route is accessible at all times. Traffic control signs and devices are to be checked daily to confirm they are still erected as per TCP and documented using PBS Traffic Controls Daily Checklist	Work Vehicles to be set up in approved work zone. Traffic Control Signage and Devices to be implemented as per approved traffic control plan.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Hoist	Fall of Person	A Almost Certain	4 Large	20	Installation by competent personnel to manufacturer / supplier requirements. Handover certificate to be received from contractor whom erected plant.	For erection, dismantle and maintenance - Use of Harness Work Permit to be issued. Harness to be inspected daily before use and maintained as per manufacturer specifications. Person with working at heights ticket to conduct works involving use of harness only.	3. Engineering	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Hoist	Hit by Falling Objects	B Likely	4 Large	16	Exclusion zone using physical barrier to be in place for erection / dismantle / altering of hoist. Authorised person only to be in direct workzone.	Tools to be on lanyards when working above 2m fall risk.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Hoist	Plant Failure	C Possible	4 Large	12	Installation by competent personnel to manufacturer / supplier requirements. Handover certificate to be received from contractor whom erected it. Load rating must be clearly identified inside the hoist. Only licensed personnel to operate personnel & materials hoist. Daily operator checks to be completed prior to operating each day. Hoist to be maintained as per manufacturer specs.		2. Administration	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP
Hot Works (Including Grinding & Welding)	Fire/Explosion	C Possible	3 Medium	9	Isolate / Exclusion zone where required and display signs. Hot Works Permit to be issued and Service Isolation Permit where required. Install flash back arrestor/s to all oxy sets and ensure suitable fire extinguishers are nearby. Flash protection screens to be used where required to protect other workers and public. Identify and isolate existing services. Ensure work areas are clear of debris. Ensure ventilation is adequate.	Arrange to have fire alarm systems disconnected in area of works.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Jump Form System	Fall of Person	B Likely	5 Very Large	20	Access hatches to be closed when not in use. Documented Emergency Procedure to be in place for injured worker retrieval including formworkers, steelers, concreters and crane crew site workers. Emergency scenario drills to be conducted with Jumpform work crew.	Methodology for install to ensure no workers is exposed to a risk of fall including crane crew members and formworkers. Delivery drivers or workers are NOT to access the back of trucks unless; *There is a handrail system incorporated onto the back of the vehicle or, *A portable handrail system is provided by the project and, *The use of a portable loading bay platform would be the ideal control measure. When one or more of these controls are implemented, workers may use the access ladder and maintain 3 points of contact when ascending or descending.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Jump Form System	Hit by Falling Objects	B Likely	4 Large	16	Climbing of form to be controlled by a competent person after final perimeter check conducted. Access hatches to be closed when not in use. Authorised person only to be in direct workzone.		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide

PBS Design Risk Register



Word Colour Legend	Acronym	Responsible Positions	Hierarchy of Control	Control Selections
Permits	SS	Sub-Contractor Supervisor	6. Elimination	2 %Controls ≥ Engineering 91%
Refer to another activity in the PRR	SM	Site Manager	5. Substitution	6 %Controls < Engineering 9%
Input required by the site team	FM	Foreman	4. Isolation	66
Reference to PBS document	CA	Contracts Administrator	3. Engineering	126
Workplace Location:			2. Administration	18
Issue Number:	NSW requirement only	EHSQ	EHSQ Co-Ordinator / Manager	1
Issue Date:		PE/SE	Project Engineer / Site Engineer	1

Activity Description	Hazard / Impact (Worst Credible Consequence)	Likelihood	Consequence	Risk Rating	Mandatory Control Measures	Site Specific Control Measures	Hierarchy of Control (Highest Level Control)	Responsible	Status	Legal and other requirements
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Jump Form System	Failure of Structure	C Possible	5 Very Large	15	Structural engineer to approve design and erection to be done by competent personnel. Climbing of form to be controlled by a competent person after final perimeter check conducted.		2. Administration	SS / SM / FM / SE / CA	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Kitchen Benchtops	Exposure to Hazardous Dust	C Possible	3 Medium	9	Workers required to cut (includes grind, drill or polish) manufactured stone containing crystalline silica with a power tool must wear respiratory protective equipment and at least one of the following controls must be in place: - a water delivery system that supplies a continuous feed of water over the area being cut to suppress the generation of dust; - a prescribed extraction system that is attached to the tool used for the cutting to capture the dust produced by the cutting; - a local exhaust ventilation system that captures the dust produced by the cutting and transports the dust to a safe emission point or to a filter or scrubber. Only workers directly involved in the activity to be in the area when cutting being undertaken.	Cutting area separation screens to be installed. Workers required to use respiratory protective equipment (RPE) must have a correctly fitted and tested face mask using either a quantitative or qualitative test. All tight-fitting respirators must have fit testing completed. There will be no cutting of kitchen benchtops on site and must be brought back to the factory if amendments are required.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Landscaping	Contact with In-Ground Services	B Likely	4 Large	16	Excavation Permit required when penetrating the ground 200mm or more. DBYD to be reviewed. Known services are to be identified and Summary Of Services Location Plan (SOS LP) to be updated on weekly basis including services that are being installed progressively by service trades. Digging by mechanical means is not to be carried out within 1m of a known live service unless EHSQ Manager has been consulted	As built to be received from the client to confirm existing services. Service Locator to be engaged to conduct survey of site and provide to PBS. Pot Holing via suction truck/hand digging every 5m to determine direction of service. . Energise/Isolate Permit may also be required.	3. Engineering	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Excavation COP, Managing electrical risks in the workplace
Landscaping	Hit by Moving Plant	C Possible	4 Large	12	Spotter to have positive communication with operator (via hand signals or UHF radio) at all times. No one is allowed in the swing zone of the piece of plant. No one is to approach plant unless the bucket/arm has been lowered and confirmation has been received by the operator that it is ok to approach. All plant to have flashing beacons operating. Mobile phones not to be used when operating plant and equipment.	Exclusion zone to be in place to prevent unauthorised entry to work area. Emergency stop button to be applied to the machine.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP
Landscaping	Plant Over-Turning	D Unlikely	4 Large	8	ROPS/FOPS to be installed on all plant involved in the work activity. Physical Barrier to be installed along top of excavation / trench to prevent plant / vehicles entering the zone of influence. The SWL of plant and its attachments is not to be exceeded. Seat Belts to be worn where fitted.	Penetration covers to be physically secured with signage and be of sufficient strength to support likely plant or equipment in the area. If sizable penetration, load & point limits to be displayed.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP
Landscaping	Fire/Explosion when refuelling plant and equipment	C Possible	4 Large	12	Hazardous Materials to be stored in designated storage area immediately after use. Fire Fighting equipment to have tag in date of 6 months and be readily accessible to the refuelling area. Refuelling area to be clear of any combustible material.	Designated refuelling area to be identified with signage on site. Hazardous Chemicals and Dangerous Goods Management Sub Plan to be in place.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing risks of hazardous chemicals in the workplace COP
Landscaping	Environmental Contamination from Spill of Hazardous Chemicals/Substances	D Unlikely	3 Medium	6	Contractor to provide, and have readily available access to, a spill kit which is appropriately sized for the risk of spill when refuelling or if damage was to occur to a piece of plant and equipment. Workers must be trained in the use of spill kits and the SDS's for chemicals/substances that they are using on this project.		2. Administration	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing risks of hazardous chemicals in the workplace COP
Landscaping	Hit by Falling Objects	D Unlikely	4 Large	8	Personnel to be instructed on proper manufacturer specifications and inspected every by a competent person - Synthetic slings are to be checked 3 monthly and documented on a register. Chains are to be tested yearly and documented on a register. The SWL of lifting equipment is not to be exceeded. Where a dogman is not available - Weight of load to be lifted to be predetermined by a competent person and marked on load. Selection of sling & slinging techniques for load is predetermined by a competent person. Lifting points are to be predetermined by a competent person and marked on the load. Standard lifting techniques must be followed with L2-L7. A competent person to be identified.		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Landscaping	Working in High Temperatures - Heat Stress/Heat Exhaustion	E Rare	2 Small	2	Sufficient quantities of cool drinking water is readily available close to work areas. Regularly rotate workers who perform more strenuous activities with less demanding tasks. Take regular work breaks in cooler areas such as air conditioned sheds.	Shade Covers to be installed. Workers to wear broad brimmed hats and sunglasses for UV protection.	3. Engineering	SS / SM / HSR	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the work environment and facilities COP

PBS Design Risk Register



Word Colour Legend	Acronym	Responsible Positions	Hierarchy of Control	Control Selections
Permits	SS	Sub-Contractor Supervisor	6. Elimination	%Controls ≥ Engineering 91%
Refer to another activity in the PRR	SM	Site Manager	5. Substitution	%Controls < Engineering 9%
Input required by the site team	FM	Foreman	4. Isolation	66
Reference to PBS document	CA	Contracts Administrator	3. Engineering	126
NSW requirement only	EHSQ	EHSQ Co-Ordinator / Manager	2. Administration	18
	PE/SE	Project Engineer / Site Engineer	1. PPE	1

Workplace Location:	
Issue Number:	
Issue Date:	

6Check formulas in L2-L7 if you add rows to ensure range is correct

Delete Legislation / Codes not applicable to your jurisdiction

Activity Description	Hazard / Impact (Worst Credible Consequence)	Likelihood	Consequence	Risk Rating	Mandatory Control Measures	Site Specific Control Measures	Hierarchy of Control (Highest Level Control)	Responsible	Status	Legal and other requirements
Landscaping	Working in Cold, Inclement or Windy Weather	E Rare	2 Small	2	Heated amenities to be provided. Suitable Access / Egress to be provided to work areas. If lightning is present in the near sky or immediate sky above then concrete booms must be lowered and persons to remain under cover in lunch sheds until the weather passes.	Inspection to be conducted prior to gates of site open by PBS Site Manager/EHS Committee to assess all access routes. Any unsuitable work areas are to be barricaded off with physical barrier until deemed safe to enter.	3. Engineering	SS / SM / HSR	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the work environment and facilities COP
Lift Installation	Fall of Person	A Almost Certain	4 Large	20	Physically fix 50 X 25mm mesh or ply to each lift shaft opening after pouring & prior to lift install commencing. Replace mesh / ply lift door opening protection with dead lock keyed lift cage physically fixed across opening before lift install commencing. Ensure temporary handrail is installed at every level with only working level removed for access but replaced before moving working temp platform. Ensure hand rails balustrades are installed & secured on top of car before works commence.	Delivery drivers or workers are NOT to access the back of trucks unless; *There is a handrail system incorporated onto the back of the vehicle or. *A portable handrail system is provided by the project and. *The use of a portable loading bay platform would be the ideal control measure. When one or more of these controls are implemented, workers may use the access ladder and maintain 3 points of contact when ascending or descending	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the work environment and facilities COP
Lift Installation	Hit by Moving Plant	C Possible	4 Large	12	No one is to approach plant unless confirmation has been received by the operator that it is ok to approach. All plant to have flashing beacons operating. Mobile phones not to be used when operating plant and equipment. Ensure working temp platform / lift cage is electrically isolated and the lift has been tagged out accordingly. Operator to be appropriately Trained / Ticketed. Isolation/Energisation Permit to be issued.	Exclusion zone to be in place to prevent unauthorised entry to work areas. Access ways to be restricted to ensure no personnel inside operating areas. Outriggers of crane to be protected by jersey kurbs or similar to prevent contact from other plant/vehicles. Use Tag Lines when appropriate to control light weight &/or large panel lifts in windy conditions. Dogman and Operator to sign into Crane Management Sub Plan. Spotter/Dogman to have positive communication with operator (via hand signals, whistle or UHF radio) at all times. Seat belts to be worn at all times when fitted. Safety harness to be worn at all times when working at height.	4. Isolation	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the work environment and facilities COP
Lift Installation	Fire/Explosion	C Possible	4 Large	12	Hot Works Permit to be in place. Area to be clear of combustible materials. Correct PPE to be worn. Flash back arrestors to all oxy sets.	225mm Grinder Permit to be in place	3. Engineering	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Welding processes COP
Lift Installation	Cuts and Lacerations	D Unlikely	2 Small	4	All guards to be fitted to power tools. All PPE requirements shall be assessed in the contractors HR SWMS	225mm grinder permit to be issued when applicable	3. Engineering	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Local Council Requirements					PBS will either communicate directly (through Letter drops, Public Notice Boards or Consultation sessions) with these entities, or through the client established communication protocols for feedback when assessing HIRAC to be implemented when reducing any potential risk(s) posed.	Insert requirements here	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Local Traffic Condition					PBS will either communicate directly (through Letter drops, Public Notice Boards or Consultation sessions) with these entities, or through the client established communication protocols for feedback when assessing HIRAC to be implemented when reducing any potential risk(s) posed.	Insert requirements here	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Masonry	Fall of Person	A Almost Certain	4 Large	20	Delivery drivers or workers are NOT to access the back of trucks unless; *There is a handrail system incorporated onto the back of the vehicle or. *A portable handrail system is provided by the project and. *The use of a portable loading bay platform would be the ideal control measure. When one or more of these controls are implemented, workers may use the access ladder and maintain 3 points of contact when ascending or descending.	Scaffold to be used with hand rails and mid rails or mesh panels. Ticketed Personnel required for operation of EWP. Harness to be worn and connected prior to bucket being raised. Harness to be inspected daily before use and maintained as per manufacturer specifications.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Masonry	Hit by Falling Objects	B Likely	4 Large	16	Physical barriers to be in place as an exclusion zone to prevent access adjacent to or behind the uncured wall and must take into consideration the arc, fall and bounce of materials and tools.	Tools to be on lanyards when working above 2m fall risk.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Masonry	Cuts and Lacerations	C Possible	2 Small	6	All guards to be fitted to power tools. Brick saw to be locked on solid bench.	225mm grinder permit to be issued when applicable	3. Engineering	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Masonry	Failure of Structure	B Likely	4 Large	16	Temporary bracing of all 'green walls' above 1.5m to be installed prior to any additional courses being laid. Contractor supervisor to ensure scaffold decks not overloaded with max loading signage visible. Masonry walls must be designed by a qualified and registered engineer. Masonry walls must not be erected in adverse weather conditions.		3. Engineering	SS / SM / FM / SE / CA	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Safe Design of Structures COP
Masonry	Noise	C Possible	2 Small	6	Hearing Protection to be worn. Brick Saw to be set up in an isolated cutting area with signage	Brick saw to be encapsulated by materials which reduce the level of noise emitted.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing noise and preventing hearing loss at the work COP

PBS Design Risk Register



		Word Colour Legend		Acronym	Responsible Positions	Hierarchy of Control		Control Selections	
		Permits	SS	SS	Sub-Contractor Supervisor	6. Elimination	2	%Controls ≥ Engineering	91%
		Refer to another activity in the PRR	SM	SM	Site Manager	5. Substitution	6	%Controls < Engineering	9%
		Input required by the site team	FM	FM	Foreman	4. Isolation	66	6Check formulas in L2-L7 if you add rows to ensure range is correct	
Workplace Location:		Reference to PBS document	CA	CA	Contracts Administrator	3. Engineering	126		
Issue Number:		NSW requirement only	EHSQ	EHSQ	EHSQ Co-Ordinator / Manager	2. Administration	18		
Issue Date:			PE/SE	PE/SE	Project Engineer / Site Engineer	1. PPE	1	Delete Legislation / Codes not applicable to your jurisdiction	

Activity Description	Hazard / Impact (Worst Credible Consequence)	Likelihood	Consequence	Risk Rating	Mandatory Control Measures	Site Specific Control Measures	Hierarchy of Control (Highest Level Control)	Responsible	Status	Legal and other requirements
Masonry	Environmental Contamination from Spill of Hazardous Chemicals/Substances	D Unlikely	2 Small	4	Designated washout / recycling areas for concrete and concrete equipment with regular monitoring. Waste water must be controlled from flowing across walkways, work areas and outside site boundaries.		4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing risks of hazardous chemicals in the workplace COP
Masonry	Exposure to Hazardous Dust	C Possible	2 Small	6	Correct PPE to be worn when mixing cement including P1/P2/P3 dust mask. Brick Saw to be set up in an isolated cutting area with signage.	Brick saw to have water attachment and dust mask to be worn when operating.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing risks of hazardous chemicals in the workplace COP
Masonry	Hit by Moving Plant	A Almost Certain	4 Large	20	No one is to approach plant unless confirmation has been received by the operator that it is ok to approach. All plant to have flashing beacons operating. Mobile phones not to be used when operating plant and equipment. Operator to be appropriately Trained / Ticketed.	Exclusion zone to be in place to prevent unauthorised entry to work area. Access ways to be redirected to ensure no personnel inside operating areas. Outriggers of crane to be protected by jersey kurbs or similar to prevent contact from other plant/vehicles. Use Tag Lines when appropriate to control light weight &/or large panel lifts in windy conditions. Dogman and Operator to sign into Crane Management Sub Plan. Spotter/Dogman to have positive communication with operator (via hand signals, whistle or UHF radio) at all times. Seat belts to be worn at all times where fitted. Refer to mobile crane operations activity in this PRR.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP
Mobile Crane Operations (includes Vehicle Mounted Crane/Telehandler/Franna/Crawler)	Hit by Moving Plant	A Almost Certain	4 Large	20	Spotter/Dogman to have positive communication with operator (via hand signals, whistle or UHF radio) at all times. No one is to approach plant unless confirmation has been received by the operator that it is ok to approach. All plant to have flashing beacons operating. Mobile phones not to be used when operating plant and equipment. Dogman and Operator to sign into Crane Management Sub Plan. Use Tag Lines when appropriate to control light weight &/or large panel lifts in windy conditions. Operator to be appropriately Trained / Ticketed.	Exclusion zone to be in place to prevent unauthorised entry to work area. Access ways to be redirected to ensure no personnel inside crane operating areas. Outriggers of crane to be protected by jersey kurbs or similar to prevent contact from other plant/vehicles.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP
Mobile Crane Operations (includes Vehicle Mounted Crane/Telehandler/Franna/Crawler)	Hit by Falling Objects	B Likely	4 Large	16	Dogman and Operator to sign into Crane Management Sub Plan. All lifting gear is to be maintained as per manufacturer specifications and inspected daily by a competent person - Synthetic slings are to be checked 3 monthly and documented on a register. Chains are to be tested yearly and documented on a register. Authorised person only to be in direct workzone.	Tag Lines to be used when appropriate to control light weight &/or large panel lifts in windy conditions	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Mobile Crane Operations (includes Vehicle Mounted Crane/Telehandler/Franna/Crawler)	Plant Over-Turning	B Likely	4 Large	16	Dogman and Operator to sign into Crane Management Sub Plan. Seat belts to be worn at all times where fitted. The SWL of the plant and its attachments is not to be exceeded. Set up in an area that is approved by PBS Site Manager. Lift study to be completed for any loads 20 Tonne or when expecting to use crane over 95% capacity. Plant is not to set up or traverse within the zone of influence of a service trench or on a service trench. Outriggers must be set up on stable ground.	Penetration covers to be physically secured with signage and be of sufficient strength to support likely plant or equipment in the area. If sizable penetration, load & point limits to be displayed. Crane to work lower than 95% capacity. Compaction test is required prior to set up of outriggers on disturbed soil. Routes for pick and carry operations to be assessed and designated by the PBS Site Manager. Working or travelling on sloping or uneven ground should be avoided where possible. If working on slopes is unavoidable the crane should be used within the manufacturer's specified capacity for operating on the relevant degree of slope.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP
Mobile Crane Operations (includes Vehicle Mounted Crane/Telehandler/Franna/Crawler)	Contact with Overhead Power Lines	C Possible	4 Large	12	Dogman and Operator to sign into Crane Management Sub Plan. No unloading / loading of trucks to happen in the vicinity of these powerlines. All plant to remain at a minimum approach distances to powerlines. Up to 132,000 volts = 3m. 132,000 - 330,000 volts = 6m. Above 330,000 = 8m.	Tiger Tails to be installed by relevant authority as a visual reminder. Install height/location indicators. Non conductive barrier to be installed between plant and power lines. Competent Spotter to have positive communication with plant (UHF radios) and observe plant movements when design envelope has the potential to reach closer than 3 metres to power lines. Install signage as visual reminder. Non conductive tag lines to be used to control load.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP, Managing electrical risks in the workplace COP
Mobile Crane Operations (includes Vehicle Mounted Crane/Telehandler/Franna/Crawler)	Plant Failure	C Possible	4 Large	12	All lifting gear is to be maintained as per manufacturer specifications and inspected daily by a competent person - Synthetic slings are to be checked 3 monthly and documented on a register. Chains are to be tested yearly and documented on a register. Daily inspection to be completed by operator prior to operation. Plant to serviced and maintained as per manufacturers specifications.	Work box available for rescue	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP
Neighbouring Businesses	Lack of Consultation	C Possible	3 Medium	9	PBS will either communicate directly (through Letter drops, Public Notice Boards or Consultation sessions) with these entities, or through the client established communication protocols for feedback when assessing HIRAC to be implemented when reducing any potential risk(s) posed.		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP
Neighbouring Residents	Lack of Consultation	C Possible	3 Medium	9	PBS will either communicate directly (through Letter drops, Public Notice Boards or Consultation sessions) with these entities, or through the client established communication protocols for feedback when assessing HIRAC to be implemented when reducing any potential risk(s) posed.		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP
Painting	Exposure to Hazardous Dust	B Likely	2 Small	8	Ensure adequate ventilation to work areas. Workers to wear suitable PPE including dust mask and eye protection. Ensure exclusion zones are in place and maintained to protect other workers when spraying.		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide

PBS Design Risk Register



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			Permits	SS	Sub-Contractor Supervisor	6. Elimination	2	%Controls ≥ Engineering	91%	
			Refer to another activity in the PRR	SM	Site Manager	5. Substitution	6	%Controls < Engineering	9%	
			Input required by the site team	FM	Foreman	4. Isolation	66			
Workplace Location:			Reference to PBS document	CA	Contracts Administrator	3. Engineering	126	⚠Check formulas in L2-L7 if you add rows to ensure range is correct		
Issue Number:			NSW requirement only	EHSQ	EHSQ Co-Ordinator / Manager	2. Administration	18			
Issue Date:				PE/SE	Project Engineer / Site Engineer	1. PPE	1			
Delete Legislation / Codes not applicable to your jurisdiction										
Activity Description	Hazard / Impact (Worst Credible Consequence)	Likelihood	Consequence	Risk Rating	Mandatory Control Measures	Site Specific Control Measures	Hierarchy of Control (Highest Level Control)	Responsible	Status	Legal and other requirements
Painting	Fall of Person	C Possible	4 Large	12	Use scaffold / EWP or platform ladders. Do not work on ladders next to open windows, balustrades or other unprotected fall areas.		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Painting	Environmental Contamination from Spill of Hazardous Chemicals/Substances	C Possible	3 Medium	9	Store paint and turps / thinners in bunded area/s and in accordance with legislative requirements. Use designated washout facilities.		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Painting	Exposure to Hazardous Material	E Rare	3 Medium	3	Obtain and adhere to risk based assessment of SDS requirements for all products brought to site. Prior to stripping any existing paint; check and confirm that it is not lead based paint.		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Partitions, Walls & Ceilings	Fall of Person	C Possible	4 Large	12	Use scaffold / EWP / platform ladders / 450mm wide trestles. All trestles / work platforms to be minimum 450 wide with handrails and access when above 1 metre high or at a lesser height where a risk assessment deems required. 3 step ladders are not to be used to gain height.	Step ladders are not allowed. All penetrations to have fixed cover.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Partitions, Walls & Ceilings	Cuts and Lacerations	C Possible	2 Small	6	All guards to be fitted to power tools. Eye Protection to be worn when using explosive power tool. No high velocity/direct action Explosive Power Tool to be used on site unless approved by PBS Site Manager and the controls required are communicated to workers via a toolbox. Explosive Powered Tool charges must be stored in a locked metal box marked "explosives". Used charges must be disposed of immediately after use.	225mm grinder permit to be issued when applicable	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Partitions, Walls & Ceilings	Noise	C Possible	2 Small	6	Hearing Protection to be worn.		1. PPE	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Partitions, Walls & Ceilings	Exposure to Hazardous Dust	D Unlikely	2 Small	4	Install dust control for MDF and other hazardous products being cut onsite.		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Perimeter Screens	Fall of Person	A Almost Certain	4 Large	20	Install handrails & mesh prior to lifting screens. Documented emergency procedure for retrieval of injured workers to be included in HR SWMS.	Use of Harness Work Permit to be issued. Harness to be inspected daily before use and maintained as per manufacturer specifications. Person with working at heights ticket to conduct works involving use of harness only.	6. Elimination	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Perimeter Screens	Hit by Falling Objects	A Almost Certain	4 Large	20	Lifting control by competent person. Lifting screens handover certificate to be provided prior to works being allowed to commence on decks. Authorised person only to be in direct workzone.		2. Administration	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Perimeter Screens	Failure of Structure	B Likely	5 Very Large	20	Structural engineer to approve design and erection to be done by competent personnel. Lifting control by qualified person.		2. Administration	SS / SM / FM / SE / CA	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Safe Design of Structures COP

PBS Design Risk Register



Word Colour Legend	Acronym	Responsible Positions	Hierarchy of Control	Control Selections
Permits	SS	Sub-Contractor Supervisor	6. Elimination	%Controls ≥ Engineering 91%
Refer to another activity in the PRR	SM	Site Manager	5. Substitution	%Controls < Engineering 9%
Input required by the site team	FM	Foreman	4. Isolation	66 126 18 1
Reference to PBS document	CA	Contracts Administrator	3. Engineering	
NSW requirement only	EHSQ	EHSQ Co-Ordinator / Manager	2. Administration	
	PE/SE	Project Engineer / Site Engineer	1. PPE	1

Workplace Location:	
Issue Number:	
Issue Date:	

6Check formulas in L2-L7 if you add rows to ensure range is correct

Delete Legislation / Codes not applicable to your jurisdiction

Activity Description	Hazard / Impact (Worst Credible Consequence)	Likelihood	Consequence	Risk Rating	Mandatory Control Measures	Site Specific Control Measures	Hierarchy of Control (Highest Level Control)	Responsible	Status	Legal and other requirements
Piling	Fall of Person	D Unlikely	4 Large	8	Exclusion zone to be in place using physical barriers around each pier. Piers must be covered and highlighted (Eg Pickets and mesh around hole) if work is not being conducted and no one is directly monitoring. Th	All piles over 600 diameter needs specific controls for the risk of fall identified in HR SWMS and reviewed by EHSQ Manager.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Piling	Exposure to Hazardous Dust	C Possible	3 Medium	9	Test Holes of soil conditions to be completed by consultant and results provided to PBS.	Contaminated areas to be bunted off using physical barriers and signage installed. Plastic to be installed over contaminated areas to prevent risk of dust arising until removal process is initiated. Plan created to highlight affected asbestos KNOWN areas, with likely areas also highlighted. This plan is then to be communicated to contractors and used in their internal communications with the workers.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Piling	Hit by Moving Plant	C Possible	4 Large	12	Spotter to have positive communication with operator (via hand signals or UHF radio) at all times. No one is allowed in the swing zone of the piece of plant. No one is to approach plant unless confirmation has been received by the operator that it is ok to approach. All plant to have flashing beacons operating. Mobile phones not be used when operating plant and equipment. All immediate workers must be outside the swing zone and behind a physical barrier protecting the hole.	Exclusion zone to be in place to prevent unauthorised entry to work area.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Piling	Plant Over-Turning	B Likely	4 Large	16	ROPS/FOPS to be installed on all plant involved in the work activity. Physical Barrier to be installed along top of excavation / trench to prevent plant / vehicles entering the zone of influence. The SWL of plant and its attachments is not to be exceeded. Seat Belts to be worn where fitted.	Penetration covers to be physically secured with signage and be of sufficient strength to support likely plant or equipment in the area. If sizable penetration, load & point limits to be displayed. Screw Piles to be identified with spray paint and spotter to have positive communication with plant operator at all times to ensure plant does not come into contact with previously installed screw piles. Exclusion zone to be in place so that other trades are not working with plant in this area	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP
Piling	Plant Failure	B Likely	3 Medium	12	All lifting gear is to be maintained as per manufacturer specifications and inspected daily by a competent person - Synthetic slings are to be checked 3 monthly and documented on a register. Chains are to be tested yearly and documented on a register. Daily inspection to be completed by operator prior to operation. Plant to serviced and maintained as per manufacturers specifications.		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP
Piling	Contact with In-Ground Services	B Likely	4 Large	16	Excavation Permit required when penetrating the ground 200mm or more. DBDY to be reviewed. Known services are to be identified and Summary Of Services Location Plan (SOS LP) to be updated on weekly basis including services that are being installed progressively by service trades. Digging by mechanical means is not to be carried out within 1m of a known live service unless EHSQ Manager has been consulted	As built to be received from the client to confirm existing services. Service Locator to be engaged to conduct survey of site and provide to PBS. Pot Holing via sucker truck/hand digging every 5m to determine direction of service. Energise/Isolate Permit may also be required.	3. Engineering	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Excavation COP, Managing electrical risks in the workplace COP
Piling	Noise	D Unlikely	3 Medium	6	Hearing Protection to be worn.	Mufflers to be used on plant. Noise and vibration monitoring required	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Piling	Hit by Falling Objects	D Unlikely	3 Medium	6	Any spoil must be stored at least 1m back from edge and on down slope side. All lifting gear is to be maintained as per manufacturer specifications and inspected daily by a competent person - Synthetic slings are to be checked 3 monthly and documented on a register. Chains are to be tested yearly and documented on a register. The SWL of lifting equipment is not to be exceeded. Where a dogman will not be used - Weight of load to be lifted to be predetermined by a competent person and marked on load. Selection of sling & slinging techniques for load is predetermined by a competent person. Lifting points are to be predetermined by a competent person and marked on the load. Standard lifting procedures must be documented within HR SWMS. Authorised person only to be in direct workzone.	Exclusion zone to be in place to prevent unauthorised entry to work area.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Plumbing	Fall of Person	C Possible	4 Large	12	Platform ladders or EWP's are to be used in the first instance. Work trestles a minimum width of 450mm can be used. Step Ladders may only be used for minor works which take less than 15 minutes to complete and 3 points of contact must be maintained. Delivery drivers or workers are NOT to access the back of trucks unless: *There is a handrail system incorporated onto the back of the vehicle or, *A portable handrail system is provided by the project and, *The use of a portable loading bay platform would be the ideal control measure. When one or more of these controls are implemented, workers may use the access ladder and maintain 3 points of contact when ascending or descending. Ladders to be stepped back from any edges of a building/balconies at least 3m or 1:1 ratio if a full perimeter screen/scaffold has been installed.	Ticketed Personnel required for operation of EWP. Harness to be worn and connected prior to bucket being raised. Harness to be inspected daily before use and maintained as per manufacturer specifications. Mobile scaffold to be used. Any mobile scaffold over 4m needs to be erected by a ticketed scaffoldor.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Plumbing	Fire/Explosion	C Possible	3 Medium	9	Hot Works Permit to be in place. Area to be clear of combustible materials. Correct PPE to be worn. Flash back arrestors to all oxy sets.	Flash/welding Screens to be installed to protect the public and other workers.	3. Engineering	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Welding processes COP
Plumbing	Cuts and Lacerations	C Possible	2 Small	6	All guards to be fitted to power tools. All PPE requirements shall be assessed in the contractors HR SWMS	225mm grinder permit to be issued when applicable	3. Engineering	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide

PBS Design Risk Register



Word Colour Legend	Acronym	Responsible Positions	Hierarchy of Control	Control Selections
Permits	SS	Sub-Contractor Supervisor	6. Elimination	%Controls ≥ Engineering 91%
Refer to another activity in the PRR	SM	Site Manager	5. Substitution	%Controls < Engineering 9%
Input required by the site team	FM	Foreman	4. Isolation	βCheck formulas in L2-L7 if you add rows to ensure range is correct
Reference to PBS document	CA	Contracts Administrator	3. Engineering	
NSW requirement only	EHSQ	EHSQ Co-Ordinator / Manager	2. Administration	
	PE/SE	Project Engineer / Site Engineer	1. PPE	1

Delete Legislation / Codes not applicable to your jurisdiction

Activity Description	Hazard / Impact (Worst Credible Consequence)	Likelihood	Consequence	Risk Rating	Mandatory Control Measures	Site Specific Control Measures	Hierarchy of Control (Highest Level Control)	Responsible	Status	Legal and other requirements
Plumbing	Hit by Moving Plant	B Likely	4 Large	16	No one is to approach plant unless confirmation has been received by the operator that it is ok to approach. All plant to have flashing beacons operating. Mobile phones not to be used when operating plant and equipment. Operator to be appropriately Trained / Ticketed.	Exclusion zone to be in place to prevent unauthorised entry to work area. Access ways to be redirected to ensure no personnel inside operating areas. Outriggers of crane to be protected by jersey kurbs or similar to prevent contact from other plant/vehicles. Use Tag Lines when appropriate to control light weight &/or large panel lifts in windy conditions. Dogman and Operator to sign into Crane Management Sub Plan. Spotter/Dogman to have positive communication with operator (via hand signals, whistle or UHF radio) at all times. Seat belts to be worn at all times where fitted. Refer to mobile crane operations activity and excavation activity in this PRR.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP. How to manage work health and safety risks COP. Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP
Plumbing	Hit by Falling Objects	C Possible	2 Small	6	Authorised person only to be in direct workzone.	Tools to be on lanyards when working above 2m fall risk. Physical barriers to be in place as an exclusion zone and must take into consideration the arc, fall and bounce of materials and tools. Area to be bunted off with signage to prevent unauthorised access.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP. How to manage work health and safety risks COP. Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Plumbing	Environmental Contamination from Spill of Hazardous Chemicals/Substances	E Rare	2 Small	2	Contractor to provide, and have readily available access to, a spill kit which is appropriately sized for the risk of spill when refuelling or if damage was to occur to a piece of plant and equipment. Workers must be trained in the use of spill kits and the SDS's for chemicals/substances that they are using on this project.		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP. How to manage work health and safety risks COP. Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing risks of hazardous chemicals in the workplace COP
Plumbing	Exposure to Hazardous Material	D Unlikely	2 Small	4	Correct PPE to be worn. SDS to be communicated to all workers involved in the task via TBT, training register or SWMS. Hazardous Materials to be stored in designated storage area immediately after use.	Hazardous Materials and Dangerous Goods sub plan to be in place.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP. How to manage work health and safety risks COP. Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing risks of hazardous chemicals in the workplace COP
Post Tension Stressing	Plant Failure	B Likely	3 Medium	12	Gauge to be calibrated as per manufacturer specifications. Plant and equipment to be maintained as per manufacturer specifications.		2. Administration	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP. How to manage work health and safety risks COP. Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP
Post Tension Stressing	Hit by Falling Objects	B Likely	4 Large	16	Place solid back board in position behind stressing conduct prior to installing stressing cables. Ensure barrier installed behind stressing equipment during initial and final stress. Signage to be installed whilst stressing. Authorised person only to be in direct workzone.		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP. How to manage work health and safety risks COP. Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Post Tension Stressing	Fall of Person	B Likely	4 Large	16	Fall Protection must be in place around edge of slab.	PT pans to be fitted in as soon as is practicable. Covers to be installed over PT pans until fitted in where they are situated in access ways. Delivery drivers or workers are NOT to access the back of trucks unless: *There is a handrail system incorporated onto the back of the vehicle or, *A portable handrail system is provided by the project and, *The use of a portable loading bay platform would be the ideal control measure. When one or more of these controls are implemented, workers may use the access ladder and maintain 3 points of contact when ascending or descending.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP. How to manage work health and safety risks COP. Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Post Tension Stressing	Cuts and Lacerations	B Likely	3 Medium	12	All guards to be fitted to power tools. Wear gloves when working with sharp steel edges.	Use a spotter at exiting point of tendon to ensure no other workers in the vicinity. Spotter is not to stand directly behind/in front of ducts. Erect physical barriers and signage as an exclusion zone. Strand ends to be protected and capped. 225mm grinder permit to be issued when applicable	4. Isolation	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP. How to manage work health and safety risks COP. Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide

PBS Design Risk Register



		Word Colour Legend		Acronym	Responsible Positions	Hierarchy of Control		Control Selections		
			Permits	SS	Sub-Contractor Supervisor	6. Elimination	2	%Controls ≥ Engineering	91%	
			Refer to another activity in the PRR	SM	Site Manager	5. Substitution	6	%Controls < Engineering	9%	6Check formulas in L2-L7 if you add rows to ensure range is correct Delete Legislation / Codes not applicable to your jurisdiction
			Input required by the site team	FM	Foreman	4. Isolation	66			
Workplace Location:			Reference to PBS document	CA	Contracts Administrator	3. Engineering	126			
Issue Number:			NSW requirement only	EHSQ	EHSQ Co-Ordinator / Manager	2. Administration	18			
Issue Date:				PE/SE	Project Engineer / Site Engineer	1. PPE	1			
Activity Description	Hazard / Impact (Worst Credible Consequence)	Likelihood	Consequence	Risk Rating	Mandatory Control Measures	Site Specific Control Measures	Hierarchy of Control (Highest Level Control)	Responsible	Status	Legal and other requirements
Post Tension Stressing	Fire/Explosion	C Possible	3 Medium	9	Hot Works Permit to be in place. Area to be clear of combustible materials. Correct PPE to be worn.	225mm Grinder Permit to be in place	3. Engineering	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Welding processes COP
Post Tension Stressing	Failure of Structure	C Possible	5 Very Large	15	Engineer to include in drawing or provide written instruction where load points are on deck. Ensure satisfactory concrete testing before final stress.	Location of where coil is to be set down on deck is to be physically marked/indicated.	3. Engineering	SS / SM / FM / SE / CA	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Safe Design of Structures COP
Precast	Fall of Person	A Almost Certain	4 Large	20	Panels to have ferules installed to allow handrails to be installed. No one is to stand on truck tray unless handrails are in place. Riggers to work off centre walk of tray or other suitable fall protection when unloading panels from transport. Appropriately qualified person only allowed to hook-on to rotate panels.	Ticketed Personnel required for operation of EWP. Harness to be worn and connected prior to bucket being raised. Harness to be inspected daily before use and maintained as per manufacturer specifications. Panels to come delivered in A-Frames to eliminate the need to climb up onto top of panels. Leading edge protection must be provided.	5. Substitution	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Precast	Failure of Structure	B Likely	5 Very Large	20	Structural engineers load point and panel approval are provided prior to erection. HR SWMS to include engineered propping method and reference lift plan & erection process plan. Structural engineer sign off to be provided after installation. Correct bolts to be used to secure props. Locks to be installed on every prop.	Formwork engineering certificate provided before setting pads.	3. Engineering	SS / SM / FM / SE / CA	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Safe Design of Structures COP
Precast	Hit by Falling Objects	A Almost Certain	5 Very Large	21+	Suitable rigger experienced in precast erection to supervise lifting process. Secondary secure line to be used when "cracking" the load. No workers to be in the release zone when driver is cracking the load. Engineer designed and approved precast insert points use compatible lifting clutches. Panel to be hooked up by an intermediate rigger. Birth certificate to be issued to PBS before approval to erect or unload on site. Authorised person only to be in direct workzone.	Exclusion zone to be in place to ensure personnel are not underneath suspended loads or in restricted areas. Tools to be on layards when working out of EWP.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Precast	Fire/Explosion	C Possible	3 Medium	9	Hot Works Permit to be in place. Area to be clear of combustible materials. Correct PPE to be worn.	Flashwelding Screens to be installed to protect the public and other workers.	4. Isolation	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Welding processes COP
Precast	Exposure to Hazardous Material	C Possible	2 Small	6	Correct PPE to be worn. SDS to be communicated to all workers involved in the task via TBT, training register or SWMS.		2. Administration	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing risks of hazardous chemicals in the workplace COP
Render	Fall of Person	C Possible	4 Large	12	Use scaffold / EWP or platform ladders.		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Render	Exposure to Hazardous Dust	D Unlikely	2 Small	4	Ensure Workers wear suitable PPE including dust mask and eye protection or full face shield when mixing.		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Render	Environmental Contamination from Spill of Hazardous Chemicals/Substances	E Rare	3 Medium	3	Designated washout areas/facilities to be used and collect / recycle waste water. Waste water to be controlled from flowing across walkways and work areas.		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Residential Plaster (ACT Only)	Fall of Person	B Likely	4 Large	16	Only use stilts as designed by manufacturer & in good working order. Complete daily check of stilts & document on Stilts Safety Checklist. Use suitable platform to put on & remove stilts. Never bend (eg pass through internal doorways) or squat (eg to collect materials) whilst wearing stilts. Only wear stilts on solid, even surface (eg no single steps, penetrations or voids) where good housekeeping has been completed & where no materials or waste products / debris are stored. Always remove stilts when climbing or descending stairs. Never wear stilts above ground floor building unless all handrailed areas have at least 2 additional height handrailing installed or large window / glassed areas are battened or boarded.		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Residential Plaster (ACT Only)	Hit by Falling Objects	D Unlikely	3 Medium	6	Authorised person only to be in direct workzone.	Physical barriers to be in place as an exclusion zone and must take into consideration the arc, fall and bounce of materials and tools . Area to be bunted off with signage to prevent unauthorised access.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide

PBS Design Risk Register



		Word Colour Legend		Acronym	Responsible Positions	Hierarchy of Control		Control Selections		
			Permits	SS	Sub-Contractor Supervisor	6. Elimination	2	%Controls ≥ Engineering	91%	
			Refer to another activity in the PRR	SM	Site Manager	5. Substitution	6	%Controls < Engineering	9%	
			Input required by the site team	FM	Foreman	4. Isolation	66			
Workplace Location:			Reference to PBS document	CA	Contracts Administrator	3. Engineering	126	6Check formulas in L2-L7 if you add rows to ensure range is correct		
Issue Number:			NSW requirement only	EHSQ	EHSQ Co-Ordinator / Manager	2. Administration	18			
Issue Date:				PE/SE	Project Engineer / Site Engineer	1. PPE	1			Delete Legislation / Codes not applicable to your jurisdiction
Activity Description	Hazard / Impact (Worst Credible Consequence)	Likelihood	Consequence	Risk Rating	Mandatory Control Measures	Site Specific Control Measures	Hierarchy of Control (Highest Level Control)	Responsible	Status	Legal and other requirements
Roof Rail Installation	Fall of Person	A Almost Certain	4 Large	20	Erected in accordance with suppliers installation manual to full perimeter of structure. Handover Certificate to be completed and provided to PBS. Scaff Tag (or equivalent signage) to be displayed on rail adjacent to entry point. HR SWMS to be developed by installer.	Entry point to roof to ensure there is no exposure to worker of risk of fall (swing gate at top of ladder or similar) EWP, Platform ladder, Scaffold, snappy scaffold or painters tressel system to be used for the install of roof perimeter hand-rail system.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Roof Rail Installation	Hit by Falling Objects	B Likely	4 Large	16	If no continuous toe board installed, a barricaded isolation zone must be in place below where person are working. Authorised person only to be in direct workzone.		4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Roofing	Fall of Person	A Almost Certain	4 Large	20	Heavy Duty sarking or safety mesh with adequate overlap and tie points or intermediate battens must be installed. Authorised access to roof only. Delivery drivers or workers are NOT to access the back of trucks unless; *There is a handrail system incorporated onto the back of the vehicle or, *A portable handrail system is provided by the project and, *The use of a portable loading bay platform would be the ideal control measure. When one or more of these controls are implemented, workers may use the access ladder and maintain 3 points of contact when ascending or descending.	Safety Mesh to be signed off by competent person and handover to be given to PBS. Voids to be adequately protected prior to accessing roof level (i.e. skylights) Where the slope of a roof exceeds 35 degrees the roof is an inappropriate surface to stand on, even with guadrailing or a catch platform. In these circumstances, roof workers need a system to prevent both sliding and falling from the perimeter and this must be documented in the HR SWMS. Use of Harness Work Permit to be issued. Harness to be inspected daily before use and maintained as per manufacturer specifications. Person with working at heights ticket to conduct works involving use of harness only. Safety catch netting installed under potential fall zones. Perimeter scaffolding installed around the perimeter.	3. Engineering	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Roofing	Hit by Falling Objects	B Likely	4 Large	16	Authorised person only to be in direct workzone.	Tools to be on lanyards when working above 2m fall risk. Physical barriers to be in place as an exclusion zone and must take into consideration the arc, fall and bounce of materials and tools. Area to be bunted off with signage to prevent unauthorised access.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Roofing	Noise	D Unlikely	2 Small	4	Hearing Protection to be worn.	Signage to be in place when using Explosive Power Tools.	2. Administration	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing noise and preventing hearing loss at the work COP
Roofing	Cuts and Lacerations	E Rare	2 Small	2	All guards to be fitted to power tools. Wear gloves when working with sharp steel edges. Eye Protection to be worn when using explosive power tool. No high velocity/direct action Explosive Power Tool to be used on site unless approved by PBS Site Manager and the controls required are communicated to workers via a toolbox. Explosive Powered Tool charges must be stored in a locked metal box marked "explosives". Used charges must be disposed of immediately after use.	225mm grinder permit to be issued when applicable	5. Substitution	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Roofing	Hit by Moving Plant	D Unlikely	4 Large	8	No one is to approach plant unless confirmation has been received by the operator that it is ok to approach. All plant to have flashing beacons operating. Mobile phones not to be used when operating plant and equipment. Operator to be appropriately Trained / Ticketed.	Exclusion zone to be in place to prevent unauthorised entry to work area. Access ways to be redirected to ensure no personnel inside operating areas. Outriggers of crane to be protected by jersey kurbs or similar to prevent contact from other plant/vehicles. Use Tag Lines when appropriate to control light weight 8/or large panel lifts in windy conditions. Dogman and Operator to sign into Crane Management Sub Plan. Spotter/Dogman to have positive communication with operator (via hand signals, whistle or UHF radio) at all times. Seat belts to be worn at all times where fitted. Refer to mobile crane operations activity	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP
Scaffold	Fall of Person	A Almost Certain	4 Large	20	Non - compliant areas of scaffold are to be isolated with signage (i.e Danger - incomplete scaffold). Sequential erection / dismantle method to ensure fall prevention for scaffolders at all times. Scaffold working platforms to be min 450mm wide with access & handrails above 1.5m fall. No trades to modify any scaffold components / arrangements nor overload platforms.	Delivery drivers or workers are NOT to access the back of trucks unless; *There is a handrail system incorporated onto the back of the vehicle or, *A portable handrail system is provided by the project and, *The use of a portable loading bay platform would be the ideal control measure. When one or more of these controls are implemented, workers may use the access ladder and maintain 3 points of contact when ascending or descending. Internal toe boards and mid rails are required where the scaffold is more than 300mm vertically, and 225mm horizontally from the building (Alternatively, these decks are to be closed off and no access allowed).	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Scaffold	Hit by Falling Objects	A Almost Certain	4 Large	20	Exclusion zone using physical barrier to be in place for erection / dismantle / altering of scaffold activities. All platforms shall be closely decked such that a gap between individual decking components in a bay is not greater than 10mm - this applies to platforms greater than 2m above ground. Authorised person only to be in direct workzone.	Working platforms are to be fully enclosed to prevent objects / materials falling through. The resultant gap between the finished face of the building and the platform edge or adjacent horizontal member of the scaffold does not exceed 100mm. All designated access points off the scaffold to the slab must be covered with ply.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Scaffold	Failure of Structure	A Almost Certain	5 Very Large	21+	Ensure that person/s are nominated to co-ordinate number of scaffold working decks (i.e close off access to current non working decks) & material loading on each deck at any one time. Scaffold to be erected in accordance with manufacturer's instructions &/or in accordance with approved scaffold plan. Handover certificate to be provided and scaff tags to be updated at each access point / change of duty loading every 30 days. No trades to modify any scaffold components / arrangements nor overload platforms. Allowable loading limits to be signed or marked on scaffold decks. Provide protection to scaffold components adjacent to areas where mobile plant is operating.	Use designated loading platforms with loading limit signage displayed.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Safe Design of Structures COP

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		Word Colour Legend		Acronym	Responsible Positions	Hierarchy of Control		Control Selections			
			Permits	SS	Sub-Contractor Supervisor	6. Elimination	2	%Controls ≥ Engineering	91%		
			Refer to another activity in the PRR	SM	Site Manager	5. Substitution	6	%Controls < Engineering	9%		
			Input required by the site team	FM	Foreman	4. Isolation	66	6. Check formulas in L2-L7 if you add rows to ensure range is correct			
Workplace Location:			Reference to PBS document	CA	Contracts Administrator	3. Engineering	126				
Issue Number:			NSW requirement only	EHSQ	EHSQ Co-Ordinator / Manager	2. Administration	18				
Issue Date:				PE/SE	Project Engineer / Site Engineer	1. PPE	1			Delete Legislation / Codes not applicable to your jurisdiction	
Activity Description	Hazard / Impact (Worst Credible Consequence)	Likelihood	Consequence	Risk Rating	Mandatory Control Measures	Site Specific Control Measures	Hierarchy of Control (Highest Level Control)	Responsible	Status	Legal and other requirements	
Scaffold	Contact with Overhead Power Lines	B Likely	5 Very Large	20	No unloading / loading of trucks to happen in the vicinity of these powerlines. All plant to remain at a minimum approach distances to powerlines. Up to 132,000 volts = 3m. 132,000 - 330,000 volts = 6m. Above 330,000 = 8m.	Tiger Tails to be installed by relevant authority as a visual reminder. Install height/location indicators. Non conductive barrier to be installed between scaffold and power lines. Install signage as visual reminder. Isolate overhead powerlines prior to erection/dismantle of scaffold	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP, Managing electrical risks in the workplace COP	
Scaffold	Hit by Moving Plant	C Possible	4 Large	12	No one is to approach plant unless confirmation has been received by the operator that it is ok to approach. All plant to have flashing beacons operating. Mobile phones not to be used when operating plant and equipment. Operator to be appropriately Trained / Ticketed.	Exclusion zone to be in place to prevent unauthorised entry to work area. Access ways to be redirected to ensure no personnel inside crane operating areas. Outriggers of crane to be protected by jersey kerbs or similar to prevent contact from other plant/vehicles. Use Tag Lines when appropriate to control lift weight &/or large panel lifts in windy conditions. Dogman and Operator to sign into Crane Management Sub Plan. Spotter/Dogman to have positive communication with operator (via hand signals, whistle or UHF radio) at all times. Seat belts to be worn if available. Refer to mobile crane operations activity in this PRR.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP	
Scaffold	Working in High Temperatures-Heat Stress/Heat Exhaustion	D Unlikely	2 Small	4	Sufficient quantities of cool drinking water is readily available close to work areas. Regularly rotate workers who perform more strenuous activities with less demanding tasks. Take regular work breaks in cooler areas such as air conditioned sheds.	Shade Covers to be installed. Workers to wear broad brimmed hats and sunglasses for UV protection.	3. Engineering	SS / SM / HSR	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the work environment and facilities COP	
Scaffold	Working in Cold, Inclement or Windy Weather	D Unlikely	2 Small	4	Heated amenities to be provided. Suitable Access / Egress to be provided to work areas. Following adverse weather conditions a full inspection to be conducted by a competent person of the scaffold.	Inspection to be conducted prior to gates of site open by PBS Site Manager/ EHS Committee to assess all access routes. Any unsuitable work areas are to be barricaded off with physical barrier until deemed safe to enter.	4. Isolation	SS / SM / HSR	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the work environment and facilities COP	
Shotcrete	Fall of Person	C Possible	4 Large	12	Edge protection as per manufacturers specifications to be installed along top of capping beam.	Mobile scaffold to be used. Any mobile scaffold over 4m needs to be erected by a ticketed scaffolder. HR Licence required for operation of EWP over 11m. Harness to be worn and connected prior to bucket being raised. Harness to be inspected daily before use and maintained as per manufacturer specifications.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide	
Shotcrete	Failure of Structure	C Possible	3 Medium	9	Confirm engineering report (geo-tech) for max depth of unsupported excavation		2. Administration	SS / SM / FM / SE / CA	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Safe Design of Structures COP, Excavation COP	
Shotcrete	Hit by Falling Objects	C Possible	2 Small	6	Authorised person only to be in direct workzone.	Exclusion zone using physical barriers to be in place.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide	
Shotcrete	Exposure to Hazardous Material	A Almost Certain	3 Medium	15	Gloves to be worn at all times. P1/P2/P3 dust mask to be worn. SDS to be communicated to all workers involved in the task via TBT, training register or SWMS.		2. Administration	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing risks of hazardous chemicals in the workplace COP	
Shotcrete	Noise	B Likely	3 Medium	12	Hearing Protection to be worn.	Mufflers to be used on plant.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing noise and preventing hearing loss at the work COP	
Site Establishment	Environmental Impact	B Likely	3 Medium	12	All Trees / vegetations areas of no disruption are to be fenced off with suitable signage as "no go" areas. Trucks & Plant to clean up roads if mud / debris carried onto roads when leaving site. Ensure spill kit available.		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide	

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		Permits	SS	Sub-Contractor Supervisor	6. Elimination	2	%Controls ≥ Engineering	91%
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		Input required by the site team	FM	Foreman	4. Isolation	66	6. Check formulas in L2-L7 if you add rows to ensure range is correct	
Workplace Location:		Reference to PBS document	CA	Contracts Administrator	3. Engineering	126		
Issue Number:		NSW requirement only	EHSQ	EHSQ Co-Ordinator / Manager	2. Administration	18		
Issue Date:			PE/SE	Project Engineer / Site Engineer	1. PPE	1	Delete Legislation / Codes not applicable to your jurisdiction	

Activity Description	Hazard / Impact (Worst Credible Consequence)	Likelihood	Consequence	Risk Rating	Mandatory Control Measures	Site Specific Control Measures	Hierarchy of Control (Highest Level Control)	Responsible	Status	Legal and other requirements
Steel Fixing	Fall of Person	B Likely	4 Large	16	Cas/Embed 4mm mesh into larger penetrations. Fixed cover to be on all penetrations over 125mm diameter. All penetration covers to be identified similar to "Danger Penetration Below". If sizeable penetrations are located in areas where plant &/or equipment is likely to be used (eg scissor lift, pallet trolley, forklift), secured covers to be of sufficient strength with load limits displayed. Platform ladder to be used when constructing lift shafts. Scaffold or the like, platforms with edge protection to be used when constructing lift shafts or vertical walls.	No one is to stand on truck tray unless it has hand rails in place. Platform Ladder or work trestles of 450mm width to be used. Mobile scaffold to be used. Any mobile scaffold over 4m needs to be erected by a ticketed scaffolder.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Steel Fixing	Hit by Moving Plant	C Possible	3 Medium	9	No one is to approach plant unless confirmation has been received by the operator that it is ok to approach. All plant to have flashing beacons operating. Mobile phones not to be used when operating plant and equipment. Operator to be appropriately Trained / Ticketed.	Exclusion zone to be in place to prevent unauthorised entry to work area. Access ways to be redirected to ensure no personnel inside crane operating areas. Outriggers of crane to be protected by jersey kurbs or similar to prevent contact from other plant/vehicles. Use Tag Lines when appropriate to control light weight &/or large panel lifts in windy conditions. Dogman and Operator to sign into Crane Management Sub Plan. Spotter/Dogman to have positive communication with operator (via hand signals, whistle or UHF radio) at all times. Seat belts to be worn if available. Refer to mobile crane operations activity in this PRR.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP
Steel Fixing	Fire/Explosion	C Possible	3 Medium	9	Hot Works Permit to be in place. Area to be clear of combustible materials. Correct PPE to be worn.	Flash/welding Screens to be installed to protect the public and other workers.	3. Engineering	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Welding processes COP
Steel Fixing	Cuts and Lacerations	B Likely	3 Medium	12	All guards to be fitted to power tools. Install bar caps on all exposed steel bars. Wear gloves when working with sharp steel edges.	225mm grinder permit to be issued when applicable	3. Engineering	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Structural Steel	Fall of Person	B Likely	4 Large	16	EWP or Scaffold to be used for access for install of structural steel. Platform ladders may also be used on even surfaces. Delivery drivers or workers are NOT to access the back of trucks unless: *There is a handrail system incorporated onto the back of the vehicle or, *A portable handrail system is provided by the project and; *The use of a portable loading bay platform would be the ideal control measure. When one or more of these controls are implemented, workers may use the access ladder and maintain 3 points of contact when ascending or descending.	Mobile scaffold to be used. Any mobile scaffold over 4m needs to be erected by a ticketed scaffolder. Ticketed Personnel required for operation of EWP. Harness to be worn and connected prior to bucket being raised. Harness to be inspected daily before use and maintained as per manufacturer specifications.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Structural Steel	Fire/Explosion	A Almost Certain	3 Medium	15	Hot Works Permit to be in place. Area to be clear of combustible materials. Correct PPE to be worn. Flash back arrestors to all oxy sets.	Flash/welding Screens to be installed to protect the public and other workers. 225mm Grinder Permit to be in place	3. Engineering	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Welding processes COP
Structural Steel	Hit by Falling Objects	C Possible	3 Medium	9	Authorised person only to be in direct workzone.	Tools to be on lanyards when working above 2m fall risk. Physical barriers to be in place as an exclusion zone and must take into consideration the arc, fall and bounce of materials and tools.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Structural Steel	Hit by Moving Plant	C Possible	4 Large	12	No one is to approach plant unless confirmation has been received by the operator that it is ok to approach. All plant to have flashing beacons operating. Mobile phones not to be used when operating plant and equipment. Operator to be appropriately Trained / Ticketed.	Exclusion zone to be in place to prevent unauthorised entry to work area. Access ways to be redirected to ensure no personnel inside crane operating areas. Outriggers of crane to be protected by jersey kurbs or similar to prevent contact from other plant/vehicles. Use Tag Lines when appropriate to control light weight &/or large panel lifts in windy conditions. Dogman and Operator to sign into Crane Management Sub Plan. Spotter/Dogman to have positive communication with operator (via hand signals, whistle or UHF radio) at all times. Refer to mobile crane operations activity in this PRR.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP
Structural Steel	Cuts and Lacerations	D Unlikely	2 Small	4	All guards to be fitted to power tools. All PPE requirements shall be assessed in the contractors HR SWMS	225mm grinder permit to be issued when applicable	3. Engineering	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Swing Stage Scaffold	Fall of Person	A Almost Certain	4 Large	20	Engineers sign off on swing stage drawing/s and engineers design certification letter. Engineer design letter for slab loading where stage inboard counterweighted/anchored. Engineers verification statement for erection swing stage. Emergency procedure to be documented in HR SWMS for retrieval of injured person. Swing stage work permit to be issued. Locked off/secure area where swing stage has been set up.		4. Isolation	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Swing Stage Scaffold	Hit by Falling Objects	A Almost Certain	4 Large	20	Exclusion zone to be established above and below swing stage (i.e full height of structure façade & ground level using 75 degree angle of repose for extent of isolated area). Authorised person only to be in direct workzone.		4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide

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Word Colour Legend	Acronym	Responsible Positions	Hierarchy of Control	Control Selections
Permits	SS	Sub-Contractor Supervisor	6. Elimination	2
Refer to another activity in the PRR	SM	Site Manager	5. Substitution	6
Input required by the site team	FM	Foreman	4. Isolation	66
Reference to PBS document	CA	Contracts Administrator	3. Engineering	126
NSW requirement only	EHSQ	EHSQ Co-Ordinator / Manager	2. Administration	18
	PE/SE	Project Engineer / Site Engineer	1. PPE	1

Workplace Location:	
Issue Number:	
Issue Date:	

6Check formulas in L2-L7 if you add rows to ensure range is correct

Delete Legislation / Codes not applicable to your jurisdiction

Activity Description	Hazard / Impact (Worst Credible Consequence)	Likelihood	Consequence	Risk Rating	Mandatory Control Measures	Site Specific Control Measures	Hierarchy of Control (Highest Level Control)	Responsible	Status	Legal and other requirements
Swing Stage Scaffold	Plant Failure	B Likely	5 Very Large	20	Log book completed each day and at change of stage team/trades using swing stage. Plant to be serviced as per manufacturer specifications.		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP
Tiling	Cuts and Lacerations	D Unlikely	2 Small	4	All guards to be fitted to power tools. Eye Protection to be worn when using grinder.		3. Engineering	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Tiling	Dust Inhalation	D Unlikely	2 Small	4	Dust Mask to be worn when cutting tiles.	Designated cutting area to be in place. All tools to have vacuum attachment.	3. Engineering	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Tower Crane	Plant Failure	B Likely	4 Large	16	All lifting gear is to be maintained as per manufacturer specifications and inspected daily by a competent person - Synthetic slings are to be checked 3 monthly and documented on a register. Chains are to be tested yearly and documented on a register. Daily inspection to be completed by operator prior to operation. Plant to serviced and maintained as per manufacturers specifications. No 'free fall' option is allowable; if the crane has this option, it must be physically locked out.		4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP
Tower Crane	Fire/Explosion when refuelling plant and equipment	C Possible	4 Large	12	Craneable diesel storage tank with self-contained bunding. Documented process to refuel tower crane. Fire Extinguisher in date of 6 month tagging requirements to be readily accessible.	Hazardous Chemicals and Dangerous Goods Management Sub Plan to be in place.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing risks of hazardous chemicals in the workplace COP
Tower Crane	Environmental Contamination from Spill of Hazardous Chemicals/Substances	C Possible	3 Medium	9	Diesel delivery truck to have suitable spill kit & documented spill control procedure with trained operator.	Hazardous Chemicals and Dangerous Goods Management Sub Plan to be in place.	2. Administration	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing risks of hazardous chemicals in the workplace COP
Tower Crane	Hit by Falling Objects	C Possible	4 Large	12	Dogman and Operator to sign into Crane Management Sub Plan. All lifting gear is to be maintained as per manufacturer specifications and inspected daily by a competent person - Synthetic slings are to be checked 3 monthly and documented on a register. Chains are to be tested yearly and documented on a register. No 'free fall' option is allowable; if the crane has this option, it must be physically locked out. Authorised person only to be in direct workzone.	Tag Lines to be used when appropriate to control light weight &/or large panel lifts in windy conditions. Immediate rigger licence required when dual lift occurring. Lanyards are to be used on all tools during crane erection/dismantle process. No multi-slinging (Christmas Tree Lifts) of materials for a single crane lift. Minimum 4 lifting points required for material & waste bins and limit load lifting to 1 bin per slung load. Suitably rated hoarding or catch deck to be installed over common areas and access ways.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Tower Crane	Contact with Overhead Power Lines	C Possible	4 Large	12	Dogman and Operator to sign into Crane Management Sub Plan. No unloading / loading of trucks to happen in the vicinity of these powerlines. All plant to remain at a minimum approach distances to powerlines. Up to 132,000 volts = 3m. 132,000 - 330,000 volts = 6m. Above 330,000 = 8m.	Tiger Tails to be installed by relevant authority as a visual reminder. Install height/location indicators. Non conductive barrier to be installed between plant and power lines. Competent Spotter to have positive communication with plant (UHF radios) and observe plant movements when design envelope has the potential to reach closer than 3 metres to power lines. Install signage as visual reminder. Non conductive tag lines to be used to control load. Alarm device to be installed on tower crane to indicate location of load.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP, Managing electrical risks in the workplace COP
Tower Crane	Multiple Crane &/or Satellite Boom/Concrete Pump Collision	B Likely	5 Very Large	20	Dogman and Operators to sign into Crane Management Sub Plan. Communication meeting to be held with other operators (i.e concrete boom) and crane crews daily before work begins on the site for the shift.	An automated anti-collision or zoning system must be installed on the tower cranes and gantry cranes when multiple cranes are planned to be in use and their planned lifting radius will interface with or overlap with other cranes. Crane crews are to be specifically trained in the operating features of the crane including the use and maintenance of the anti - collision or zoning system fitted to the crane. Separate vertical and horizontal communication channels shall be provided and an established procedure in place and utilised prior to slewing into another crane's radius. Dedicated fail safe backup landline intercom system installed between 2 crane operators.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP
Tower Crane	Fall of Person	A Almost Certain	4 Large	20	Delivery drivers or workers are NOT to access the back of trucks unless: *There is a handrail system incorporated onto the back of the vehicle or, *A portable handrail system is provided by the project and, *The use of a portable loading bay platform would be the ideal control measure. When one or more of these controls are implemented, workers may use the access ladder and maintain 3 points of contact when ascending or descending. Dogman are to remain inside/behind perimeter edge protection when working on decks.	For Erection, Dismantle and Maintenance of the Tower Crane - Use of Harness Work Permit to be issued. Harness to be inspected daily before use and maintained as per manufacturer specifications. Person with working at heights ticket to conduct works involving use of harness only.	3. Engineering	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide

PBS Design Risk Register



Word Colour Legend		Acronym	Responsible Positions		Hierarchy of Control		Control Selections		Delete Legislation / Codes not applicable to your jurisdiction	
							%Controls ≥ Engineering	91%		
	Permits	SS	Sub-Contractor Supervisor		6. Elimination	2	%Controls ≥ Engineering	91%		
	Refer to another activity in the PRR	SM	Site Manager		5. Substitution	6	%Controls < Engineering	9%		
	Input required by the site team	FM	Foreman		4. Isolation	66	Check formulas in L2-L7 if you add rows to ensure range is correct			
Workplace Location:	Reference to PBS document	CA	Contracts Administrator		3. Engineering	126				
Issue Number:	NSW requirement only	EHSQ	EHSQ Co-Ordinator / Manager		2. Administration	18				
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Activity Description	Hazard / Impact (Worst Credible Consequence)	Likelihood	Consequence	Risk Rating	Mandatory Control Measures	Site Specific Control Measures	Hierarchy of Control (Highest Level Control)	Responsible	Status	Legal and other requirements
Traffic Control	Hit by Moving Vehicular Traffic	A Almost Certain	4 Large	20	Consultant holding correct tickets to provide Traffic Management Plan (including Traffic Control Plan) which is specific to the works on site. Signage and Devices to be set up in accordance with approved Traffic Control Plan by workers who hold the correct tickets. Traffic Controllers to position themselves where an escape route is accessible at all times. Traffic control signs and devices are to be checked daily to confirm they are still erected as per TCP and documented using PBS Traffic Inspection Schedule. Delivery Drivers to stay within immediate vicinity of vehicle & be escorted by associated trade. Reversing plant must be managed by a spotter or adequate isolation barriers.	Physical Barrier which will take the force of a vehicle crashing into it to be set up in between workers and road users. Signage to be held down with weights and/or other appropriate methods to prevent them blowing over. Traffic and Vehicle Management Sub Plan to be in Place.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, AS 1742
Traffic Control	Impact on current Traffic Conditions	C Possible	5 Very Large	15	Traffic Management and Traffic Control Plan to be in place which has been selected or created by a competent person. Traffic Control signage and devices to be installed as per approved TCP.	No contractor parking on site. Workers are advised to utilise public transport. Work Zone on the road is only to be utilised for delivery of material and tools. Traffic and Vehicle Management Sub Plan to be in place	5. Substitution	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, AS 1742
Traffic Control	Vehicle / Plant Collision	C Possible	5 Very Large	15	Traffic Management and Traffic Control Plan to be in place which has been selected or created by a person holding the correct tickets if works conducted outside PBS Perimeter Fencing. Traffic Control signage and devices to be installed as per approved TCP. Traffic control signs and devices are to be checked daily to confirm they are still erected as per TCP and documented using PBS Traffic Inspection Schedule. Reversing plant must be managed by a spotter or adequate isolation barriers	Traffic and Vehicle Management Sub Plan to be in place. No contractor parking on site. All plant and equipment on site to have flashing lights or hazard lights operating.	2. Administration	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, AS 1742
Tree Trimming and Removal Work	Fall of Person	B Likely	4 Large	16	Suitably qualified and experienced person only to climb tree's and remove/top tree branches. Qualified Arborists to confirm tree suitable for climbing. Use of Harness Work Permit to be issued. Harness to be inspected daily before use and maintained as per manufacturer specifications. Ticketed Personnel required for operation of EWP. Harness to be worn and connected prior to bucket being raised. Harness to be inspected daily before use and maintained as per manufacturer specifications.		3. Engineering	SS / SM / FM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Tree Trimming and Removal Work	Hit by Falling Objects	B Likely	4 Large	16	Tools to be on lanyards when working above 2m fall risk. Physical barriers to be in place as an exclusion zone and must take into consideration the arc, fall and bounce of materials and tools. Trained and competent operators (as per national unit of competency) to undertake tree felling work only. Authorised person only to be in direct workzone.	Physical Barriers to be in place as an exclusion zone. Spotters in place at every possible entry point to prevent access to danger area.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Tree Trimming and Removal Work	Damage to protected flora or fauna	C Possible	3 Medium	9	Tree Protection zones using robust barricading to be in place with signage. Flora and Fauna Management Sub Plan to be in place.	Timber batten protection to be placed directly onto the tree trunks in High Pedestrian traffic areas (i.e. public locations in the street near PBS hoardings)	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Tree Trimming and Removal Work	Projectiles hitting personnel	C Possible	3 Medium	9	Correct PPE to be worn. Trained and competent operators of plant and equipment. All guards as per manufacturer specifications are to be on chipping machines, chainsaws and general plant. Only specified tree/branch sizes to be placed into chipping machines.	Physical Barriers to be in place as an exclusion zone. Spotters in place at every possible entry point to prevent access to danger area.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Tree Trimming and Removal Work	Cuts and Lacerations	C Possible	4 Large	12	All guards to be fitted to power tools. Only competent (as per national unit of competency) and trained operators to use chainsaw. Chainsaw should not be used above shoulder height. Select chainsaw with the shortest practicable bar length for each work task undertaken. Chainsaw to be operated and maintained in accordance with manufacturers instructions. Chainsaw to be started on level ground and be secure when pulling the starter.	225mm grinder permit to be issued when applicable	5. Substitution	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Use of Harness	Fall of Person	B Likely	4 Large	16	Potential wind conditions must be assessed as suitable for works to commence and be continually monitored by competent person. Engineering certification of all anchor points to be confirmed. Work Supervisor to confirm suitability of rope support, protection and positioning. Rescue and Recovery to be referenced in HR SWMS. Harness work permit to be issued. Safety Harnesses to be used as a last resort. Working at Heights training required for all workers wearing harnesses in fall arrest mode or at least 1 trained worker when used in fall restraint mode. Harness equipment visually checked prior to every use & 6 monthly by a competent person. Temporary anchor points to be installed as per manufacturer guidelines, inspected prior to each use & on regular basis by competent person (i.e working at heights trained)		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, Managing the risk of fall COP, PBS Safety Guide
Use of Harness	Hit by Falling Objects	B Likely	4 Large	16	Physical barriers to be in place as an exclusion zone to prevent access underneath the work area and must take into consideration the arc, fall and bounce of materials and tools. Signage to be installed. Tools to be on lanyards. Authorised person only to be in direct workzone. Daily clean of work area.	Traffic Control in place for public areas. Materials to be hoisted down on lanyards.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, Managing the risk of fall COP, PBS Safety Guide

PBS Design Risk Register



Word Colour Legend	Acronym	Responsible Positions	Hierarchy of Control	Control Selections	
				%Controls ≥ Engineering	91%
Permits	SS	Sub-Contractor Supervisor	6. Elimination	2	91%
Refer to another activity in the PRR	SM	Site Manager	5. Substitution	6	9%
Input required by the site team	FM	Foreman	4. Isolation	66	Check formulas in L2-L7 if you add rows to ensure range is correct
Reference to PBS document	CA	Contracts Administrator	3. Engineering	126	
NSW requirement only	EHSQ	EHSQ Co-Ordinator / Manager	2. Administration	18	
PE/SE	PE/SE	Project Engineer / Site Engineer	1. PPE	1	Delete Legislation / Codes not applicable to your jurisdiction

Activity Description	Hazard / Impact (Worst Credible Consequence)	Likelihood	Consequence	Risk Rating	Mandatory Control Measures	Site Specific Control Measures	Hierarchy of Control (Highest Level Control)	Responsible	Status	Legal and other requirements
Waste Management	Environmental Impact	B Likely	3 Medium	12		<ul style="list-style-type: none"> The establishment of designed waste handling areas;Based on the identification of key waste types, identify skip requirements for on-site separation, collection, off-site recycling and disposal-The correct storage and handling of waste materials including liquids;Appropriate disposal and verification of all waste leaving site; and-Waste reduction, storage, separation (for reuse and recycling) and disposal requirements may be included in either relevant specifications, contractual agreements, supply agreements or quality assurance documents-Undertake in-situ sampling and testing of proposed spoil to determine waste classification where appropriate-Include information in the Site Induction about waste Minimisation and management and the conservation of resources including paper, electricity and water-Establish suitably located and designed stockpile, waste and material storage and handling areas-Identify wet trade washout requirements and have subcontractors establish appropriately designed and located eco-wash facilities. No dumping of concrete on site with the exception of concrete hopper and line blowout at the end of the pour-Concrete Place Subcontractor will be responsible to clean up and negotiate with PBS any removal from site any excess concrete.-All site drainage i.e. Stormwater inlets are to be protected from potential spills-Identify major suppliers and material requirements and identify opportunities to minimise packaging-Encourage the identification and procurement of recycled materials and recycled content products (i.e. timber, concrete, road base, asphalt etc.)-Maximise the reuse and recycling of demolition materials.-Co-ordinate the sharing and reuse of raw materials, excess products, and building materials including plywood, hoarding, fencing, concrete and formwork where possible.-Dispose of waste using licensed contractors to appropriately licensed or approved facilities 	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Waterproofing	Exposure to Hazardous Material	C Possible	3 Medium	9	Obtain and adhere to risk based assessment of SDS requirements for all products brought to site. Isolate and ventilate the area as applicable in the sds.		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Waterproofing	Fall of Person	C Possible	4 Large	12	Use scaffold / EWP or platform ladders.		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Windows	Fall of Person	B Likely	4 Large	16	<p>Scaffold or EWP to be used. Platform ladders may be used on ground floor. . Delivery drivers or workers are NOT to access the back of trucks unless:</p> <ul style="list-style-type: none"> *There is a handrail system incorporated onto the back of the vehicle or, *A portable handrail system is provided by the project and, *The use of a portable loading bay platform would be the ideal control measure. <p>When one or more of these controls are implemented, workers may use the access ladder and maintain 3 points of contact when ascending or descending. Ladders to be stepped back from any edges of a building/balconies at least 3m or 1:1 ratio if a full perimeter screen/scaffold has been installed.</p>	Ticketed Personnel required for operation of EWP. Harness to be worn and connected prior to bucket being raised. Harness to be inspected daily before use and maintained as per manufacturer specifications. Mobile scaffold to be used. Any mobile scaffold over 4m needs to be erected by a ticketed scaffolder. Loads to arrive pre-slung to eliminate the need for workers to stand on the truck tray. Internal edge protection needed when installing windows from inside the building on any level above ground.	3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide
Windows	Hit by Falling Objects	B Likely	3 Medium	12	Approved, regularly inspected lifting frames to be used. Check suction and battery strength prior to lifting if applicable. Engineered lifting frames to be inspected annually by boiler maker or other competent person to ensure suitability for purpose and be recorded on plant and equipment register. Authorised person only to be in direct workzone.	Tools to be on lanyards when working above 2m fall risk. Physical barriers to be in place as an exclusion zone and must take into consideration the arc, fall and bounce of materials and tools. Area to be bunted off with signage to prevent unauthorised access.	4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide

PBS Design Risk Register



		Word Colour Legend		Acronym	Responsible Positions	Hierarchy of Control		Control Selections			
			Permits	SS	Sub-Contractor Supervisor	6. Elimination	2	%Controls ≥ Engineering	91%		
			Refer to another activity in the PRR	SM	Site Manager	5. Substitution	6	%Controls < Engineering	9%		
			Input required by the site team	FM	Foreman	4. Isolation	66	δCheck formulas in L2-L7 if you add rows to ensure range is correct			
Workplace Location:			Reference to PBS document	CA	Contracts Administrator	3. Engineering	126				
Issue Number:			NSW requirement only	EHSQ	EHSQ Co-Ordinator / Manager	2. Administration	18				
Issue Date:				PE/SE	Project Engineer / Site Engineer	1. PPE	1			Delete Legislation / Codes not applicable to your jurisdiction	
Activity Description	Hazard / Impact (Worst Credible Consequence)	Likelihood	Consequence	Risk Rating	Mandatory Control Measures	Site Specific Control Measures		Hierarchy of Control (Highest Level Control)	Responsible	Status	Legal and other requirements
Windows	Hit by Moving Plant	C Possible	3 Medium	9	No one is to approach plant unless confirmation has been received by the operator that it is ok to approach. All plant to have flashing beacons operating. Mobile phones not be used when operating plant and equipment. Operator to be appropriately Trained / Ticketed.	Exclusion zone to be in place to prevent unauthorised entry to work area. Access ways to be redirected to ensure no personnel inside operating areas. Outriggers of crane to be protected by jersey kurbs or similar to prevent contact from other plant/vehicles. Use Tag Lines when appropriate to control light weight &/or large panel lifts in windy conditions. Dogman and Operator to sign into Crane Management Sub Plan. Spotter/Dogman to have positive communication with operator (via hand signals, whistle or UHF radio) at all times. Seat belts to be worn at all times where fitted. Refer to mobile crane operations activity in this PRR.		4. Isolation	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide, Managing the risks of plant in the workplace COP
Windows	Cuts and Lacerations	B Likely	2 Small	8	All guards to be fitted to power tools. All PPE requirements shall be assessed in the contractors HR SWMS	225mm grinder permit to be issued when applicable		3. Engineering	SS / SM	Open	WHS Act 2011, WHS Regulations 2017, Construction Work COP, How to manage work health and safety risks COP, Work health and safety consultation, coordination and cooperation COP, PBS Safety Guide