

Rivercity Terraces – Carpark Spalling Repairs SWMS VI

Version #	SWMS Title
V1	Rivercity Terraces – Carpark Spalling Repairs SWMS V1

Job Details			
Site Name	Rivercity Terraces	Site Address	85 Deakin St, Kangaroo Point QLD 4169
Job # / BX Job # (If applicable)	49391 / J1185	Job Start Date	08.10.2024
Job Description	Carpark Spalling Repairs	Overall Risk	Low Score 7

Approvals				
	Name	Date	Sign	Contact #
Coordinator (Prepared By)	Izaac Maroney	04.10.2024	<i>I Maroney</i>	0460 884 470
Site Supervisor	Charlie Wood			0416 294 638
OH&S Officer	Jordan Davie	04.10.24	<i>J Davie</i>	0450 308 591
Client (If Applicable)				

High Risk Work Identification			
Involves a risk of person falling 2 metres	☐	Involves demolition of a load-bearing element of a structure	☒
Involves structural alterations or repairs that require temporary support to prevent collapse	☒	Is carried out in or near a shaft or trench with an excavated depth greater than 1.5m, or a tunnel	☐
Is carried out on or near pressurised gas distribution mains or piping	☐	Is carried out on or near energised electrical installations or services	☐
Involves tilt-up or precast concrete	☐	Is carried out in an area at a workplace in which there is any movement of powered mobile plant	☐
Is carried out in or near water or other liquid that involves a risk of drowning	☐	Is carried out on a telecommunication tower	☐
Involves, or is likely to involve, the disturbance of asbestos	☐	Is carried out in or near a confined space	☐
Involves the use of explosives	☐	Is carried out on or near chemical, fuel or refrigerant lines	☐
Is carried out in an area that may have a contaminated or flammable atmosphere	☒	Is carried out on, in or adjacent to a road, railway, shipping lane or other traffic corridor that is in use by traffic other than pedestrians	☒
Is carried out in an area where there are artificial extremes of temperature	☐	Involves diving work	☐

External Considerations						
Permits	Hot Work ☐	Confined Space ☐	Local Council ☐	Lift (crane) ☐	Restricted Access ☐	Other - ☐
Licenses / Certifications	General Construction Induction Card, Fit Test Certificate					
Subcontracted Works ☒	Structural Propping & Engineer, AC Contractor, Electrician, Plumber, Gas Fitter, Fire Services Contractor All contractors to provide individual SWMS					
Materials	Sika Ferrogard-510 patch, Sika Ferrogard-500 Crete, Sika Monotop-412 NFG, Crommelin Blackseal, SikaTop Armatec-110 EpoCem.					
Chemicals ☒						
Plant / Equipment	General powered / non-powered hand tools					

Core4 Requirements	
Planning/Preparation	- Contractors must liaise with Core4 to identify on-site safety systems and procedures - Establish supervisory and communication arrangements (Principal contractor to confirm emergency response procedures is in place.)
Sign-In Point	- Point identified by Core4 - All contractors to report to Sign-In Point prior to beginning works.
Training/Licence	- All staff onsite to have a General Construction Induction Card - Relevant workers have relevant certificates of competency, licenses, and training. - Trained First Aider on site All workers are advised of site-specific emergency and evacuation procedures, SWMS, safe work procedures, and safety data sheets.
Worker duties and responsibilities	- Fit condition for work, i.e. no signs of fatigue, alcohol or drugs - Complete / attend all site inductions / briefings - Comply with all site requirements, e.g. PPE, Traffic Management Plans (TMP) - When choosing a control method, the hierarchy of controls must be followed. Starting with elimination Inspect completed work and report possible safety, environmental and quality matters
Monitor/Review	- All people involved in the works must have this SWMS communicated to them before work commences. - SWMS to be reviewed regularly and amended, if necessary, in consultation with relevant people after any near miss or incident (The method for this is through the regular toolbox / pre-start talks) - If additional site hazards are identified, review this SWMS and amend control measures to suit - People, including workers, contractors and sub-contractors, affected by the revisions to this SWMS must be informed ASAP - The site supervisor to monitor works against the controls stated in this SWMS - SWMS must be kept on-site and made available for inspection or review - Keep a record of this SWMS until the job is complete or for two years if involved in a notifiable incident Regardless of any other factor, the person in control of the workplace must review this SWMS at least annually.

PPE Requirements													
 Steel Toe Safety Boots	☒	 Respirator	☒	 Hand Protection	☒	 Head Protection	☒	 Hearing Protection	☒	 High Visibility Clothing	☒	 Eye Protection	☒
 Face Shield	☒	 Guard in Place	☒	 Height Safety Harness	☐	 Protective Clothing	☐	 Sun Protection Hat	☐	 Sunscreen	☐	 Edge Protection	☐
 Seat Belt	☐	 Static Line and Lanyard	☐	 Welding Goggles	☐	 Wheel Chocks	☐		☐		☐		☐

Controls Table						
Step	Hazard	Initial Risk	Key Safety Controls & Associated Procedures	Control type	Residual Risk	Person Responsible
1. Setting up work site	Unauthorised access to restricted areas	High Score 18	<u>Site Induction</u> - All workers are to be inducted into both the client's requirements (if required) and Core4 requirements prior to works beginning <u>Site Sign-In</u> - Where applicable, all workers are to report to the site office or operations manager (or similar) to inform of the works commencing	Administration	Moderate Score 8	- Workers required to adhere to instructions and client requirements - Coordinators to ensure workers are inducted to the site prior to works commencing
	General Public Interference / harm	Moderate Score 13	<u>Exclusion Zone</u> - Workers are to set up the exclusion zone with temporary fencing or closed off bollards (Bollards with hazard tape / bunting between) - Where possible, the workers are to set up a visual barricade in addition to the physical	Isolation	Low Score 4	- Workers to install - Site supervisor to oversee
	Hazardous Manual Tasks	Moderate Score 9	<u>Staff Training</u> - Ensure staff are trained in manual handling techniques prior to lifting <u>Additional Assistance</u> - When lifting equipment or materials 20kg or over, workers are to either; - Employ a secondary worker to assist in the lifting - Employ the use of moving trolleys and dollies	Administration / Engineering	Low Score 5	- Coordinator to ensure - OH&S Officer to train offsite - Site Supervisor to train onsite and enforce - Worker to utilise training
	Site Security	High Score 18	<u>Lockable / Securable Areas</u> - Where there is a risk of materials, equipment being stolen, workers are to ensure the storage area is lockable and locked prior to leaving the area unsupervised <u>Security Camera's</u> - Where there is either a high risk or a higher cost of equipment / materials being stores, workers are to install wireless security cameras facing the areas at risk - Camera signage is to be installed as well	Engineering	Moderate Score 8	- Workers to ensure to follow instructions and install the items - Site supervisor to enforce / assess requirement

Controls Table						
Step	Hazard	Initial Risk	Key Safety Controls & Associated Procedures	Control type	Residual Risk	Person Responsible
Set up tools (Part 2)	Hazardous Manual Tasks	Moderate Score 9	<u>Staff Training</u> - Ensure staff are trained in manual handling techniques prior to lifting <u>Additional Assistance</u> - When lifting equipment or materials 20kg or over, workers are to either; - employ a secondary worker to assist in the lifting - employ the use of moving trolleys and dollies <u>Public Traffic</u> - Workers are to be wary of traffic if moving equipment through public areas including roadways	Administration / Engineering	Low Score 5	- Coordinator to ensure - OH&S Officer to train offsite - Site Supervisor to train onsite and enforce - Worker to utilise training
	Electrical Equipment	High Score 17	<u>Test and Tag</u> - All corded equipment is to be tested and tagged by an officially trained person - All test and tags are to be in date and valid <u>Individual Visual Inspection</u> - Prior to beginning the use of any electrical equipment, workers are to visually inspect to ensure no significant damage	Administration / Engineering	Low Score 7	- OH&S Officer to test and tag & keep record - Site supervisor is to ensure their site is compliant - Workers are to ensure visual inspection and vigilance
2. General (Part 1)	Weather Exposure	High Score 18	<u>Cold Weather Exposure</u> - Use of PPE - Jacket, gloves, various warm clothing, etc (Note that all jackets/jumpers/vests onsite must be high vis) <u>Hot Weather Exposure</u> - Use of PPE – Sunscreen (SPF 50+), Wide brim hat, UV protective sleeves, etc - Where possible, workers will have a dedicated undercover area for regular breaks - Workers are to take regular breaks and drink as much water as possible to prevent heat stroke and associated illnesses	PPE / Elimination / Administration	Moderate Score 8	- OHS Officer to ensure training of workers - Site supervisor to enforce and visually monitor workers and allow breaks when needed - Workers to ensure the use of PPE and heat stroke prevention methods

Controls Table						
Step	Hazard	Initial Risk	Key Safety Controls & Associated Procedures	Control type	Residual Risk	Person Responsible
General (Part 2)	Powered / Non-Powered Hand Tools	Moderate Score 9	<u>Training</u> - Workers are to be shown correct use method by a senior worker with adequate experience in the use of the tool - Workers are to have their general construction induction card <u>PPE</u> - Workers are to ensure the use of required PPE for the specific job - Workers are to inspect their PPE for cleanliness, damage and utility prior to any use - Workers are to be trained in the use of PPE	Administration / PPE	Low Score 2	- OHS Officer to ensure training of workers - Site supervisor to advise of correct PPE to use (in consultation with OH&S Officer) & enforce - Workers to follow instructions
3. General Workplace Dust Creation (Part 1)	Airborne Concrete Dust / Respirable Crystalline Silica	Extreme Score 20	<u>Confirm Silica Presence</u> - All dust is to be considered silica until proven otherwise - Refer to material's SDS – materials containing >1% silica are high risk works - Materials without SDS's to be treated as silica (Bear in mind that silica is contained in 90% of the earth's crust). This includes, but isn't limited to; Earthmoving, brick, concrete, mortar, etc.	Administration	Moderate Score 11	Site supervisor to consult with MSDS's and Control Table prior to the works with the potential to create dust
			<u>Use of Water Suppressants</u> - Methods of water suppressants include but are not limited to; - Tool Integrated Water Delivery System - Constant flow water delivery at the point of contact from an external source (i.e garden hose, water bottle, backpack sprayer, etc.). This external source is to be an additional worker to the person conducting the works - Refer to "Use of Controls Table"	Engineering		- Worker to utilise and adhere to instructions - Site supervisor to enforce

Controls Table						
Step	Hazard	Initial Risk	Key Safety Controls & Associated Procedures	Control type	Residual Risk	Person Responsible
General Workplace Dust Creation (Part 2)	Airborne Concrete Dust / Respirable Crystalline Silica	Extreme Score 20	<u>Use of Local Exhaust Ventilation (LEV)</u> - Throughout indoor works, where ever possible, the workers are to employ the use of portable exhaust fans or other means of mechanical ventilation (in addition to other controls) - Position the ventilation to move contaminated air away from the workers' breathing zones	Engineering	Moderate Score 11	- Worker to install - Site supervisor to ensure correct installation and adequate efficiency
			<u>Use of a Tool Integrated Vacuum System</u> - The vacuum attached must be an approved H or M Class Vacuum as per AS/NZS 60335.2.69. - The vacuum is to be in good working order with; - A functioning and clean / new filter installed - The catch bag is in tact / sealed with no tears or openings - Refer to "Use of Controls Table"	Engineering		- Worker to inspect equipment prior to use - Site supervisor to ensure the use of the correct vacuum
			<u>Use of Controls Table</u> - Workers are to refer to the controls table within the RCS Code of Practice (linked / referenced at the bottom of the document) prior to any works that have the potential to create respirable crystalline silica being carried out - When deciding on method or control for the tool, the worker must first investigate the possibility of water suppression, then resort to vacuum integration - If the use of an MPF 50 RPE is requires, works are not to continue unless the individuals' respirator has been confirmed to be compliant - Refer to "Air Monitoring"	Administration		Site supervisor to ensure use of controls table

Controls Table						
Step	Hazard	Initial Risk	Key Safety Controls & Associated Procedures	Control type	Residual Risk	Person Responsible
General Workplace Dust Creation (Part 3)	Airborne Concrete Dust / Respirable Crystalline Silica	Extreme Score 20	<u>Required Use Of RPE</u> - Worker is to as far as possible, ensure the use of methods that do not require the use of RPE (Even in this case, RPE is still to be worn as a precaution) - In the event where the controls table dictates that the works being conducted triggers the required use of RPE, alternative methods are to be investigated first. Refer to "Use of controls table" - Then if no other methods are available for the works (inside / outside / change equipment), the RPE must be worn. Refer to "RPE" - Refer to "Worker Rotation" - Refer to "Health Monitoring"	Administration	Moderate Score 11	- Site supervisor to investigate method of works and mitigate use of RPE - Worker to adhere to instructions
			<u>Worker Rotation</u> - Where possible, workers are to be rotated in their duties to avoid exceeding the WES (e.g. mixing for <15 minutes total, etc) - Workers rotated are to isolate from hazard once role is rotated - Refer to Step "8. Concreting" Control "Concrete Mixing"	Administration / Isolation		- Worker to isolate after rotation and adhere to instructions - Site supervisor to enforce
			<u>RPE</u> - All RPE used is to be medically fit tested to the individual within the past 12 months - Workers using RPE are to be clean shaven with no more than 1 day of growth present - All RPE worn is to have an MPF of 10 or more - Use of correct cartridge / filter (see applicable SDS's) - Worker to inspect and conduct pre-use checks (negative & positive pressure checks, fitment, etc.)	PPE		- Worker to inspect RPE and it's components, carry fit test certificate - Coordinator to confirm current fit test - Site supervisor to confirm correct MPF (P2/P3), current fit test, and clean shave - OHS to organise fit testing & re-testing to keep workers current

Controls Table						
Step	Hazard	Initial Risk	Key Safety Controls & Associated Procedures	Control type	Residual Risk	Person Responsible
General Workplace Dust Creation (Part 4)	Airborne Concrete Dust / Respirable Crystalline Silica	Extreme Score 20	Health Monitoring - In the event that the worker is required to use RPE, they are to report the respirator use to their supervisor / superior - OH&S is to record worker respirator use and employ health monitoring if any worker exceeds more than 30 days of use in a 12 month period	Administration	Moderate Score 11	- Worker to inform of respirator use - Site supervisor to inform OHS of respirator use - OHS to record information
			Training - All workers who are involved in the works are to be made aware of the risks involved with silica and ways to mitigate exposure / risk through; - Toolbox talks - Pre-start talks - All workers are to read this document to ensure they are competent in the control methods available	Administration		- OHS to advise at toolboxes - Site supervisor to discuss in pre-starts - Workers to receive training
			Air Monitoring - Air monitoring is to be conducted and results recorded in the circumstance where the works being conducted aren't listed within the control table - If it's found to be required, results are to be assessed to determine appropriate controls to continue works	Engineering		- Site supervisor to determine it's requirement by referring to the control table - Coordinator to organise testing if tis found to be required - OHS Office to assess results & determine controls
			Exclusion Zones Where the works are due to exceed the limit in the controls table, an isolated area for works to conducted is to be employed this is to ensure workers who aren't involved in the silica works aren't effected	Isolation		- Supervisor to determine requirement and check effectiveness once erected - Worker to install / erect

Controls Table						
Step	Hazard	Initial Risk	Key Safety Controls & Associated Procedures	Control type	Residual Risk	Person Responsible
General Workplace Dust Creation (Part 5)	Airborne Concrete Dust / Respirable Crystalline Silica	Extreme Score 20	<u>Signage</u> - In the event that works are indoor and exceeding the exposure limit in the control table, "Silica Hazard" & "RPE Required" signage is to be installed on the entries to the indoor area prior to works beginning and removed immediately after completion - The signage is to be installed as to not be immediately / easily visible by the general public	Administration	Moderate Score 11	- Site supervisor and Coordinator to determine whether it's required - Worker to install and ensure the signage is only installed during hazardous works
	Reduced visibility as a result of airborne dust	Moderate Score 9	<u>Use of Local Exhaust Ventilation (LEV)</u> - Throughout indoor works, where ever possible, the workers are to employ the use of portable exhaust fans or other means of mechanical ventilation (in addition to other controls) - Position the ventilation to move contaminated air away from the workers' breathing zones	Engineering	Low Score 2	- Worker to install - Site supervisor to evaluate effectiveness
			<u>Use of Water Suppressants</u> - Methods of water suppressants include but are not limited to; - Tool Integrated Water Delivery System - Constant flow water delivery at the point of contact from an external source (i.e garden hose, water bottle, backpack sprayer, etc.). This external source is to be an additional worker to the person conducting the works - Refer to "Use of Controls Table"	Engineering		- Worker to install - Site supervisor to evaluate effectiveness
	Reduced visibility as a result of airborne dust	Moderate Score 9	<u>Use of a Tool Integrated Vacuum System</u> - The vacuum attached must be an approved H or M Class Vacuum as per AS/NZS 60335.2.69. - The vacuum is to be in good working order with; - A functioning and clean / new filter installed - The catch bag is in tact / sealed with no tears or openings - Refer to "Use of Controls Table"	Engineering	Low Score 2	- Worker to install - Site supervisor to evaluate effectiveness

Controls Table						
Step	Hazard	Initial Risk	Key Safety Controls & Associated Procedures	Control type	Residual Risk	Person Responsible
General Workplace Dust Creation (Part 6)	Slips / Trips / Falls as a result of Water Suppressant Methods	High Score 14	<u>PPE</u> All personnel onsite are to be wearing non-slip, steel toe boots	PPE	Low Score 2	- Worker to ensure use - Site supervisor to confirm all workers are wearing the PPE
			<u>Housekeeping</u> - Ensure the remanence (left overs) of the water suppressants are kept off of slippery surfaces. Where not possible, see "Signage" below <u>Signage</u> - Employ the use of wet floor hazard signage	Administration		- Workers to ensure correct housekeeping methods and signage use - Site supervisors to enforce and monitor effectiveness
4. Concrete Cutting (Part 1)	High Risk Power Tools	High Score 18	<u>PPE</u> Adequate PPE is to be worn by the workers at all times it is required	PPE	Moderate Score 8	- Site supervisor is to choose required PPE in consultation with OHS if required - Workers to follow instruction
			<u>Training</u> - Site supervisors or experienced tradesmen are to ensure the onsite training of the workers to ensure competency in the tool in question - This is by either asking the worker of their experience levels with said tool - Or by having previously witnessed the worker operating it safely - Workers are to ensure they advise their superior if they are unsure on operation methods	Administration		- Worker is to ask if unsure on how to operate - Lead hand / experienced tradesman to teach safe operation methods - Site supervisor to enforce and monitor

Controls Table						
Step	Hazard	Initial Risk	Key Safety Controls & Associated Procedures	Control type	Residual Risk	Person Responsible
Concrete Cutting (Part 2)	RCS Dust	Extreme Score 20	<u>Refer to Code Of Practice Control's Table</u> - Water Suppressant preferred - Refer to the control table to find suitable controls and the associated RPE requirements <u>Refer to “4. General Workplace Dust Creation (Part 1-5)” Step Above</u> - Ensure all components of this step is read and understood	Administration / Engineering / Isolation / PPE	Moderate Score 11	- Workers to adhere to instruction - Site supervisor to assess as per above specifications and consult with OHS when unsure
	Loud Operational Noise	High Score 18	<u>PPE</u> Worker is to use hearing protection, Ideally ear muffs, however ear plugs are acceptable if installed correctly	PPE	Low Score 4	- Worker to ensure use in required scenario's - Site supervisor to enforce
	Hazardous manual tasks when handling the machinery (Vibration, Lifting heavy machinery for extended periods of time, awkward positioning, etc.)	Moderate Score 9	<u>Use of Manufacturers Handles</u> Where provided, the worker is to have the manufacturer provided handles installed on the machine to reduce the likelihood of MSD's (Muscular- Skeletal Disorder) injuries due to vibration or heavy lifting	Engineering	Low Score 5	- Worker ensure installation - Site supervisor to monitor
			<u>Worker Rotation</u> Where possible, the workers using the equipment are be rotated regularly with another worker to limit exposure to vibration	Administration		- Site supervisor to monitor and enforce - Workers to adhere to instructions
			<u>Regular Breaks</u> Where workers aren't able to be rotated, regular breaks with re-hydration (drink) and nourishment (food) are to be taken	Administration		- OHS to ensure training for the workers - Workers to ensure the use of appropriate techniques - Site supervisor to enforce
			<u>Use of manual handling techniques</u> - Use manual handling techniques taught in toolbox talks - Lift with the knees - Refrain from holding objects overhead when possible, etc. Refer to the Code of Practice in “Reference Material” on the final page of this document for any further information			

Controls Table						
Step	Hazard	Initial Risk	Key Safety Controls & Associated Procedures	Control type	Residual Risk	Person Responsible
5. Jackhammer Works (Part 1)	Airborne Projectiles	High Score 18	<u>PPE</u> Worker is to use a face shield or safety goggles / glasses to prevent airborne debris from coming in contact with their eyes	PPE	Low Score 4	- Worker to ensure use in required scenario's - Site supervisor to enforce
	Loud Operational Noise	High Score 18	<u>PPE</u> Worker is to use hearing protection, Ideally ear muffs, however ear plugs are acceptable if installed correctly	PPE	Low Score 4	- Worker to ensure use in required scenario's - Site supervisor to enforce
	Hazardous manual tasks when handling the machinery (Vibration, Lifting heavy machinery for extended periods of time, etc.)	Moderate Score 9	<u>Use of Manufacturers Handle</u> Throughout jack hammer works, the worker is to have the manufacturer provided handle installed on the machine to reduce the likelihood of MSD's (Muscular- Skeletal Disorder) injuries due to vibration or heavy lifting	Engineering	Low Score 5	- Worker ensure installation - Site supervisor to monitor
			<u>Worker Rotation</u> Where possible, the workers using the jackhammer are to be rotated regularly with another worker to limit exposure to vibration	Administration		- Site supervisor to monitor and enforce - Workers to adhere to instructions
	Hazardous manual tasks when handling debris (Handling sharp materials, repetitive movement, heavy materials, etc.)	Moderate Score 9	<u>Further Breaking Up of Debris</u> - Where the worker is required to move broken concrete material, the worker using the jackhammer is to break up the concrete pieces into smaller, more manageable pieces - Due to added repetition, the above controls should be used as well	Administration	Low Score 5	- Worker to ensure use of the control - Site supervisor to enforce and monitor
			<u>Use of Machinery to Reduce Lifting</u> - Where the quantity of debris to be moved exceeds an amount that is practically able to be moved manually, the use of machinery is required to reduce the manual handling required by the worker (Excavator or similar) - Workers are to use a wheel barrow or similar to reduce the time in which they have to carry the debris	Substitution / Engineering		- Coordinator is to attempt to make this determination prior to works beginning - Site supervisor to monitor requirements and enforce - Worker to ensure use / adhere to instruction

Controls Table						
Step	Hazard	Initial Risk	Key Safety Controls & Associated Procedures	Control type	Residual Risk	Person Responsible
Jackhammer Works (Part 2)	Hazardous manual tasks when handling debris (Handling sharp materials, repetitive movement, heavy materials, etc.)	Moderate Score 9	<u>Worker Rotation</u> - Where possible, the workers are to be rotated regularly with another worker to limit time under tension <u>Regular Breaks</u> - Where workers aren't able to be rotated, regular breaks with re-hydration (drink) and nourishment (food) are to be taken	Administration	Low Score 5	- Site supervisor to monitor requirements and enforce - Worker to ensure use / adhere to instruction
			<u>PPE</u> - Workers are required to use appropriate PPE to mitigate injury - Demolition gloves to mitigate cuts & blisters - Various other required PPE mentioned previously	PPE		- Site supervisor to monitor requirements and enforce - Worker to ensure use / adhere to instruction
			<u>Use of manual handling techniques</u> - Use manual handling techniques taught in toolbox talks - Lift with the knees - Refrain from holding objects overhead when possible, etc. Refer to the Code of Practice in "Reference Material" on the final page of this document for any further information	Administration		- OHS to ensure training for the workers - Workers to ensure the use of appropriate techniques - Site supervisor to enforce

Controls Table						
Step	Hazard	Initial Risk	Key Safety Controls & Associated Procedures	Control type	Residual Risk	Person Responsible
Jackhammer Works (Part 3)	High Risk Power Tools	High Score 18	PPE Adequate PPE is to be worn by the workers at all times it is required	PPE	Moderate Score 8	- Site supervisor is to choose required PPE in consultation with OHS if required - Workers to follow instruction
			Training - Site supervisors or experienced tradesmen are to ensure the onsite training of the workers to ensure competency in the tool in question - This is by either asking the worker of their experience levels with said tool - Or by having previously witnessed the worker operating it safely - Workers are to ensure they advise their superior if they are unsure on operation methods	Administration		- Worker is to ask if unsure on how to operate - Lead hand / experienced tradesman to teach safe operation methods - Site supervisor to enforce and monitor
	RCS Dust	Extreme Score 20	Refer to Code Of Practice Control's Table - Water Suppressant preferred - Refer to the control table to find suitable controls and the associated RPE requirements Refer to "4. General Workplace Dust Creation (Part 1-5)" Step Above - Ensure all components of this step is read and understood	Administration / Engineering / Isolation / PPE	Moderate Score 11	- Workers to adhere to instruction - Site supervisor to assess as per above specifications and consult with OHS when unsure
6. Concrete Grinding (Part 1)	RCS Dust	Extreme Score 20	Use of walk behind floor grinder - In all circumstances where concrete grinding is being conducted, a walk behind grinder must be considered first, only when this is not possible other methods be assessed in consultation with the controls table - Must be used with a suitable vacuum – See "Use of a Tool Integrated Vacuum System"	Substitution	Moderate Score 11	- Worker to adhere to instruction - Site supervisor to monitor

Controls Table						
Step	Hazard	Initial Risk	Key Safety Controls & Associated Procedures	Control type	Residual Risk	Person Responsible
Concrete Grinding (Part 2)	RCS Dust	Extreme Score 20	Use of a Tool Integrated Vacuum System - The vacuum attached must be an approved H or M Class Vacuum as per AS/NZS 60335.2.69. - The vacuum is to be in good working order with; - A functioning and clean / new filter installed - The catch bag is in tact / sealed with no tears or openings Refer to "Use of Controls Table"	Engineering	Moderate Score 11	- Worker to inspect equipment prior to use - Site supervisor to ensure the use of the correct vacuum
			Refer to Code Of Practice Control's Table - Water Suppressant preferred - Refer to the control table to find suitable controls and the associated RPE requirements Refer to "4. General Workplace Dust Creation (Part 1-5)" Step Above - Ensure all components of this step is read and understood	Administration		- Workers to adhere to instruction - Site supervisor to assess as per above specifications and consult with OHS when unsure
	Loud Operational Noise	High Score 18	PPE Worker is to use hearing protection, Ideally ear muffs, however ear plugs are acceptable if installed correctly	PPE	Low Score 4	- Worker to ensure use in required scenario's - Site supervisor to enforce
	Hazardous manual tasks when handling the machinery (Vibration, Lifting heavy machinery for extended periods of time, awkward positioning, etc.)	Moderate Score 9	Use of Manufacturers Handles Where provided, the worker is to have the manufacturer provided handles installed on the machine to reduce the likelihood of MSD's (Muscular- Skeletal Disorder) injuries due to vibration or heavy lifting	Engineering	Low Score 5	- Worker ensure installation - Site supervisor to monitor
			Worker Rotation - Where possible, the workers using the equipment are to be rotated regularly with another worker to limit exposure to vibration Regular Breaks - Where workers aren't able to be rotated, regular breaks with re-hydration (drink) and nourishment (food) are to be taken	Administration		- Site supervisor to monitor and enforce - Workers to adhere to instructions

Controls Table						
Step	Hazard	Initial Risk	Key Safety Controls & Associated Procedures	Control type	Residual Risk	Person Responsible
Concrete Grinding (Part 3)	Hazardous manual tasks when handling the machinery (Vibration, Lifting heavy machinery for extended periods of time, awkward positioning, etc.)	Moderate Score 9	Use of manual handling techniques - Use manual handling techniques taught in toolbox talks - Lift with the knees - Refrain from holding objects overhead when possible, etc. Refer to the Code of Practice in “Reference Material” on the final page of this document for any further information	Administration	Low Score 5	- OHS to ensure training for the workers - Workers to ensure the use of appropriate techniques - Site supervisor to enforce
7. Concreting (Part 1)	RCS Dust	Extreme Score 20	Refer to Code Of Practice Control's Table - Water Suppressant preferred - Refer to the control table to find suitable controls and the associated RPE requirements Refer to “4. General Workplace Dust Creation (Part 1-5)” Step Above - Ensure all components of this step is read and understood	Administration	Moderate Score 11	- Workers to adhere to instruction - Site supervisor to assess as per above specifications and consult with OHS when unsure
			Concrete Mixing - All dry materials being mixed must be mixed for a maximum of 14 minutes per day, per person - Refer to “Worker Rotation” in Step 4 “General Workplace Dust Creation (Part 2)”	Administration		- Worker to isolate after rotation and adhere to instructions - Site supervisor to enforce
			Removing Formwork - No use of powered tools to potentially create dust – hand tools and drills (to remove screws) only - This does not create enough RCS dust to exceed the workplace exposure standard so proceed as normal	Administration		- Worker to adhere to instructions - Site supervisor to monitor and enforce
			Working with Wet Concrete This does not create enough RCS dust to exceed the workplace exposure standard so proceed as normal	Administration		- Worker to adhere to instructions - Site supervisor to monitor and enforce

Controls Table						
Step	Hazard	Initial Risk	Key Safety Controls & Associated Procedures	Control type	Residual Risk	Person Responsible
Concreting (Part 2)	Hazardous Manual Tasks during area preparation	High Score 14	<u>Jackhammer Works</u> Refer to Step “6. Jackhammer Works”	Administration / Engineering / Isolation / PPE	Low Score 6	- Workers to adhere to instruction - Site supervisor to assess enforce
		Moderate Score 9	<u>Worker Rotation</u> Where possible, the workers using the equipment are be rotated regularly with another worker to limit exposure to vibration	Administration	Low Score 2	- Site supervisor to monitor and enforce - Workers to adhere to instructions
			<u>Regular Breaks</u> Where workers aren’t able to be rotated, regular breaks with re-hydration (drink) and nourishment (food) are to be taken			
			<u>Further Breaking Up of Debris</u> - Where the worker is required to move broken concrete material, the worker using the jackhammer is to break up the concrete pieces into smaller, more manageable pieces - Due to added repetition, the above controls should be used as well	Administration		- Worker to ensure use of the control - Site supervisor to enforce and monitor
			<u>Use of Machinery to Reduce Lifting</u> - Where the quantity of debris to be moved exceeds an amount that is practically able to be moved manually, the use of machinery is required to reduce the manual handling required by the worker (Excavator or similar) - Workers are to use a wheel barrow or similar to reduce the time in which they have to carry the debris	Engineering		- Coordinator is to attempt to make this determination prior to works beginning - Site supervisor to monitor requirements and enforce - Worker to ensure use / adhere to instruction
			<u>Use of manual handling techniques</u> - Use manual handling techniques taught in toolbox talks - Lift with the knees - Refrain from holding objects overhead when possible, etc. Refer to the Code of Practice in “Reference Material” on the final page of this document for any further information	Administration		- OHS to ensure training for the workers - Workers to ensure the use of appropriate techniques - Site supervisor to enforce

Controls Table						
Step	Hazard	Initial Risk	Key Safety Controls & Associated Procedures	Control type	Residual Risk	Person Responsible
Concreting (Part 3)	Re-Bar Protrusions	Moderate Score 13	<u>Re-Bar End Caps</u> All protrusions that are created must have an end cap installed to highlight the hazard and mitigate the chances of being impaled	Engineering	Low Score 5	- Workers to install - Site supervisor to monitor
	Skin Contact with Wet Concrete	High Score 14	<u>PPE</u> - Workers are to be wearing gumboots or similar water proof knee high boots - When they anticipate skin contact with, they must wear appropriate PPE to act as a barrier	PPE	Low Score 5	- Workers to use - Workers to advise other PPE and enforce
	Exposed Post / Pier Holes	High Score 18	<u>Hole Covers</u> - Pieces of structural ply or similar (must be strong enough to withhold the weight should someone step on it) must be placed over the penetrations <u>Exclusion Zones</u> - In addition to hole covers, secured exclusion zones are to be placed surrounding the penetrations where possible	Isolation	Low Score 4	- Site supervisors to assess requirements - Workers to install / adhere to instructions

Controls Table						
Step	Hazard	Initial Risk	Key Safety Controls & Associated Procedures	Control type	Residual Risk	Person Responsible
8. Housekeeping (Part 1)	Environmental Impacts (Contamination of waterways, improper waste disposal, etc)	High Score 18	<u>Contamination of Water Ways</u> - Where there is a potential for slurry / contaminated water to enter waterways, sandbags or similar are to be used to re-route - Dispose of RCS materials in bins provided on site - Dispose of empty containers/bags in approved waste containers - Be sure also to wash company machinery and vehicles away from driveways, gutters and roads, ensuring the water runoff will not enter storm water drains to reduce the likelihood of further transference of seeds and contaminated soil.	Engineering / Isolation	Moderate Score 8	- Site supervisor to investigate it's requirement prior to starting works - Worker to adhere to instructions
			<u>Chemicals</u> - Be mindful of chemical spills and handle Hazardous Substances with care - Always obtain and follow the instructions on the appropriate Material Safety Data Sheet (MSDS) while using the chemicals - Clean up spills immediately	Administration		- Workers to adhere to instruction - Site supervisor to enforce
			<u>Transference of Plant Life</u> Make sure all soil and seeds are removed from machinery and vehicles in order to avoid the transfer of unwanted weeds to new locations	Administration		- Workers to adhere to instruction - Site supervisor to enforce
			<u>Rubbish</u> - Always remove any rubbish, and waste from the place of work and dispose of correctly by placing any recyclable materials in the recycle bins provided. - If no recycle bins are present, please inform your manager immediately and you will be provided with the adequate resources in order to dispose of rubbish appropriately.	Elimination		- Workers to adhere to instruction - Site supervisor to enforce

Controls Table						
Step	Hazard	Initial Risk	Key Safety Controls & Associated Procedures	Control type	Residual Risk	Person Responsible
Housekeeping (Part 2)	Environmental Impacts (Contamination of waterways, improper waste disposal, etc)	High Score 18	Improper Waste Disposal - Place all silica waste in approved containers, e.g. slurry, disposable clothing or PPE, rags (taking care not to create airborne silica dust) - Wear RPE for redundancy, refer to step 4 "General Workplace Dust Creation (Part 3)" (RPE Control) - All silica waste containers identified, e.g. the label must identify the substance as 'Silica dust hazard.'	Substitution / Isolation	Moderate Score 8	- Site supervisor to enforce and monitor - Worker to adhere to instructions
	RCS Dust	Extreme Score 20	Cleaning Up - ALWAYS wet the areas to be swept / shovelled prior to sweeping. NEVER DRY SWEEP - Keep the areas wet if they start to dry up - Do not use compressed air to clean dusty areas - Replace sweeping / shoveling with vacuuming with H or M Class vacuum where possible - When vacuuming, take care not to disturb settled silica dust - Wear RPE for redundancy, refer to step 4 "General Workplace Dust Creation (Part 3)" (RPE Control)	Substitution	Moderate Score 11	- Site supervisor to enforce and monitor - Worker to adhere to instructions
			Use of Local Exhaust Ventilation (LEV) - Throughout indoor works, where ever possible, the workers are to employ the use of portable exhaust fans or other means of mechanical ventilation (in addition to other controls) - Position the ventilation to move contaminated air away from the workers' breathing zones	Engineering		- Worker to install - Site supervisor to ensure correct installation and adequate efficiency
	RCS Dust	Extreme Score 20	Cleaning / Disposal of Vacuum Filters - NEVER clean with compressed air - Use a secondary vacuum to clean - If not possible, it must be replaced - Always take extra care when handling full bags / filters to not create airborne dust - Wear RPE for redundancy, refer to step 4 "General Workplace Dust Creation (Part 3)" (RPE Control)	Substitution	Moderate Score 11	- Site supervisor to enforce and monitor - Worker to adhere to instructions

Controls Table						
Step	Hazard	Initial Risk	Key Safety Controls & Associated Procedures	Control type	Residual Risk	Person Responsible
9. On Completion (Daily & Overall) (Part 1)	Debris in walkway (General and sharp)	High Score 18	<u>Sweeping</u> - If there was RCS dust present, refer to step 9 “Housekeeping” - All debris is to be cleared from walkways or cleared to create a walkway <u>General Clean Up</u> - All workstations are to be kept tidy and kept free of clutter to reduce likelihood of workplace injury	Elimination	Low Score 2	- Site supervisor to enforce and monitor - Worker to adhere to instructions
	Exposure to RCS	Extreme Score 20	<u>Personal Decontamination</u> - Use a HEPA vacuum cleaner to remove apparent signs of contamination on clothing - Wipe skin, clothes, shoes, eye protection with a damp cloth - Wipe the respirator with a damp cloth – but do not remove - Remove, boots and any other PPE - Remove respirator - Wash face and hands with soapy water. Pay attention to under the fingernails Never use compressed air for personal decontamination.	Substitution	Moderate Score 11	- Site supervisor to enforce and monitor - Worker to adhere to instructions
			<u>Worksite Decontamination</u> - Clean up any slurry produced to prevent the slurry from drying & releasing silica dust into the air - Use damp rags to wipe down RCS-contaminated areas and equipment - Carefully roll or fold any plastic sheeting used to cover any surface within the RCS work area, so as not to spill any collected dust or debris - If necessary, use damp rags or a HEPA vacuum cleaner to clean any remaining visibly contaminated sections of the RCS work area Never use compressed air for cleaning.	Engineering	Moderate Score 11	- Site supervisor to enforce and monitor - Worker to adhere to instructions

Controls Table						
Step	Hazard	Initial Risk	Key Safety Controls & Associated Procedures	Control type	Residual Risk	Person Responsible
On Completion (Daily & Overall) (Part 2)	Debris in walkway (General and sharp)	High Score 18	<u>Sweeping</u> - If there was RCS dust present, refer to step 9 "Housekeeping" - All debris is to be cleared from walkways or cleared to create a walkway <u>General Clean Up</u> - All workstations are to be kept tidy and kept free of clutter to reduce likelihood of workplace injury	Elimination	Low Score 2	- Site supervisor to enforce and monitor - Worker to adhere to instructions
	Site Security	High Score 17	<u>Material / Equipment Storage</u> - To be stored neatly in a convenient area which is lockable and secured from the general public - Where there are security cameras installed, the items should be stored within vision as best as possible <u>Site Security</u> - Site should be lockable and locked at the end of each day - Where there are security cameras installed, there should be vision of the entry points at the end of the day	Engineering	Low Score 7	- Site supervisor to monitor for requirement and enforce - Worker to adhere to instructions
	Material / Equipment Weather Exposure	High Score 18	<u>Isolation</u> - When there are items that have a potential to be damaged as a result of weather while no-one is onsite, there should be a method of isolation installed where possible. E.g. - Secured Tarp - Secured Gazebo - Items Move Indoors - Or similar	Isolation	Low Score 4	- Site supervisor to monitor for requirement and enforce when required - Worker to adhere to instructions

Controls Table						
Step	Hazard	Initial Risk	Key Safety Controls & Associated Procedures	Control type	Residual Risk	Person Responsible
10. Emergency Evacuation	Structural Movement / Collapse	Extreme Score 20	<u>Spotter</u> - Spotter required throughout duration of works - Spotter to monitor the structures overhead to workers for any signs of movement (regardless of amount of movement); - Spotter to visually or verbally warn workers if possible - Where workers are incapable of hearing or seeing any warnings from the spotter, the spotter is to pull workers away immediately if any movement is detected. - Workers are to then STOP WORKS IMMEDIATELY and move directly to the nearest structural post that is not connected to the damaged structural member - Workers are to then fully evacuate if / when possible, and make contact with the general manager to advise of cease of works	Engineering	Moderate Score 11	- Core4 spotter to monitor for minor to critical signs of movement - Site supervisor to monitor the controls for effectiveness - Workers to adhere to instructions
11. Temporary structural support	Structural Collapse During Repair	Extreme Score 20	<u>Engineering & Temporary Supports</u> - Engineers to evaluate structure; - Temporary supports installed in alignment with engineers requirements - Core4 spotter in place (refer to emergency evacuation plan).	Engineering	Moderate Score 11	- Engineer to provide solution - Spotter to monitor - Site supervisor to monitor controls for effectiveness - Site supervisor to ensure installation in accordance with engineer requirements - Workers to adhere to instructions of supervisor and engineer
12. Traffic management near work zone	Vehicle/pedestrian collision	High Score 18	<u>Isolation</u> - Temporary fencing exclusion zone set up around work area; - Spotter in place to manage vehicle and pedestrian movements; - Appropriate signage and barriers installed	Isolation	Low Score 4	- Spotter to monitor - Site supervisor to monitor - Workers to adhere to instructions

Risk Matrix		Consequence				
		Minor	Moderate	Major	Critical	Disastrous
Frequency	Almost Certain	High Score 15	High Score 19	Extreme Score 22	Extreme Score 24	Extreme Score 25
	Likely	Moderate Score 10	High Score 14	High Score 18	Extreme Score 21	Extreme Score 23
	Possible	Low Score 6	Moderate Score 9	Moderate Score 13	High Score 17	Extreme Score 20
	Unlikely	Low Score 3	Low Score 5	Moderate Score 8	Moderate Score 12	High Score 16
	Rare	Low Score 1	Low Score 2	Low Score 4	Low Score 7	Moderate Score 11
Residual Risk Key						
Extreme Risk		DO NOT commence/continue or entertain works in this category				
High Level Risk		Manager / OH&S Officer to assess and approve safe work plan for works.				
Medium Level Risk		Workplace Manager (immediate supervisor) to assess and approve safe work plan for works.				
Low Level Risk		Operator authorised to apply control measures and proceed with works.				
Least Effective		Hierarchy of Controls				Most Effective
PPE		Administrative	Engineering	Isolation	Substitution	Elimination

Emergency Planning & Response

Emergency equipment must be provided. Minimum one qualified first aider familiar with resuscitation and emergency response for electrical shock on site at any time. First aid kit must be suitable for project activities and include at least 500ml of saline solution for potential eye injuries.

- Emergency Management: Follow the organisation's Emergency Response Plan which is found under “Emergency Management” section in the HSE Management Plan. **Dial 000 (112 from mobiles) in case of emergency.**
- Injury / Incident Reporting: Report all incidents and injuries to site contact. Document incidents or injuries using the incident / injury report form.
- Environmental Spills: Follow Environmental Management Procedure.
- 1 ABE fire extinguisher to be always available in vehicle / on site.

Onsite Additional Controls

Step	Hazard	Key Safety Controls & Associated Procedures	Person Responsible	Approved By Site Supervisor	Date	Changes Sent to OH&S?
13.						
14.						

Onsite Additional Controls						
Step	Hazard	Key Safety Controls & Associated Procedures	Person Responsible	Approved By Site Supervisor	Date	Changes Sent to OH&S?
15.						
16.						
17.						
18.						

Reference Material	
Legislation	Codes of Practice / Guidelines
QUEENSLAND Work Health and Safety Act 2011 (QLD) Work Health and Safety Regulation 2011 (QLD)	First Aid in the Workplace Managing the Risk of Falls at Workplaces Managing Electrical Safety Risks in the Workplace Preventing Falls in Housing Construction Managing the Risk of Plant in the Workplace Managing Noise and Preventing Hearing Loss in the Workplace How to Manage Work Health and Safety Risks Hazardous Manual Tasks Code of Practice Managing Risks of Hazardous Chemicals Model Code of Practice: Managing the work environment and facilities WHS Consultation, Cooperation & Coordination Model Code of Practice: Confined Spaces Managing respirable crystalline silica dust exposure in construction and manufacturing of construction elements
NEW SOUTH WALES Work Health and Safety Act 2011 (NSW) Work Health and Safety Regulation 2017 (NSW) Electricity Safety Act 1945	
AUSTRALIAN CAPITAL TERRITORY Work Health and Safety Act 2011 (ACT) Work Health and Safety Regulation 2011 (ACT)	
NORTHERN TERRITORY Work Health and Safety (National Uniform Legislation) Act 2011 (NT) Work Health and Safety (National Uniform Legislation) Regulations (NT)	
SOUTH AUSTRALIA Work Health and Safety Act 2012 (SA) Work Health and Safety Regulation 2012 (SA)	
TASMANIA Work Health and Safety Act 2012 (TAS) Work Health and Safety Regulation 2012 (TAS)	
VICTORIA Occupational Health and Safety Act 2004 (VIC) Occupational Health and Safety Regulations 2007 (VIC)	
WESTERN AUSTRALIA Occupational Safety and Health Act 1984 (WA) Occupational Safety and Health Regulations 1996 (WA)	
NEW ZEALAND Health and Safety at Work Act 2015 (NZ)	

SWMS Consultation and Sign off

Acknowledgement By Staff / Sub Contractors

By signing this document, you acknowledge that you have read this SWMS in the presence of a supervisor and understand the procedures and safety requirements.

We confirm we have been instructed in the SWMS process and understand our role in this process. We agree with the residual risk levels and control measures required to perform the tasks based on the identified tasks and hazards, and therefore recommend the task for the appropriate approval.

By signing, and acknowledging this SWMS, you understand and accept that:

1. The WHS Policy, relevant Risk Assessments, SWMSs and SWPs for this task have been reviewed, explained and are clearly understood by me
2. I shall only carry out work for which I am equipped and competent and advised my supervisor of any individual needs
3. I will comply with all relevant Risk Control Measures, otherwise work must stop immediately
4. I will be vigilant regarding hazards and the suitability of the identified Risk Control Measures; and
5. I understand that I am authorised and expected to safely stop work and immediately notify my supervisor if a task carries an unacceptable level of risk.

Use the fields below if signing off on a paper-based SWMS.

Team Member Name	Position	Date	Signature

Rivercity Terraces – Carpark Spalling Repairs

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