SWMSEA

SAFE WORK METHOD STATEMENT & Environmental Analysis – Part 1

Version 4.1

Company details

Company Name: Five Star Quality Roofing PTY LTD

ABN: 99 120 548 870

Contracting Licence Number: 212552C

Address: 83 Clyburn Ave Jamisontown NSW 2750

Contact Name, Position: Mark Wallace Director
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Project details

Principal Contractor: WISDOM HOMES

Project: Domestic & Commercial Roof Tiling

Job Address: ALL WISDOM HOMES SITES

Job Description: Roof Tiling (Classified – HIGH RISK ACTIVITY) – INCLUDES Roof Maintenance

Activity: Roofing Works – Installation of battens, roof tiles, accessories and ancillary items where roof pitch is no greater than 35 degrees and rafters (trusses) are at maximum of 600mm centres.

This SWMSEA has been developed in consultation with:

Name:	Signature:	Job Title:	Date:
Mark Wallace		Director	14/4/16

Personnel responsible for monitoring and managing activity:

Name Mark Wallace

Overall Risk Rating After Controls

Level 1	High
Level 2	Medium
Level 3	**Low**

ALL PERSONS INVOLVED IN TASK MUST HAVE THIS SWMSEA COMMUNICATED TO THEM PRIOR TO WORK COMMENCING

Authorised by: Mark Wallace
Signature:

Five Star Quality Roofing Pty Ltd
Date: 14h April 2016

- Regular inspections and observations will be conducted by FIVE STAR QUALITY ROOFING to ensure SWMSEA is being complied with.
- Tool Box Talks will be undertaken to identify, control and communicate additional site hazards.
- Work must cease immediately if incident or near miss occurs.
- SWMSEA must be amended in consultation with relevant persons.
- Amendments must be approved by the **Supervisor** and communicated to all affected workers before work resumes.

Personal Protective Equipment

Non-Slip Foot Protection	Hearing Protection (where req.)	High Visibility Clothing	Head Protection (Hard Hat/Sun Hat)	Eye Protection (Safety/UV)	Respirator (where req.)	Dust Mask (where req.)	Hand Protection (where req.)
							

Day Operations – Normal Requirements:

Safety footwear, hearing protection, high visibility shirt or vest, hard hat (if required), sun protection. Eye/face protection (goggles/glasses/sun glasses), hand protection (gloves) as required. Respirators and dust masks are required where the MSDS specifies. Any other site specific PPE requirements (to be supplied by Principal PCBU Builder)

Safety Notes

The SWMSEA covers general safety aspects associated with the installation of Roof Battens, Reflective foil insulation (Sarking), Roof Tiles and accessories. It does not contain detailed information in relation to plant and equipment (such as Truck mounted cranes, Forklifts, Scaffolding etc.) as these require a dedicated SWMSEA. A task and site specific SWMSEA must be developed.

Main hazards:

- Falls
- Falling objects
- Slips, trips & falls
- Manual Handling
- Crushing
- Electric shock
- Laceration

Exposure to hazardous atmosphere

Substances (SDS attached)

- Concrete Roof Tiles and roof tile accessories
- Terracotta Roof Tiles and accessories
- Green Pine Timber
- Thermofoil Reflective Foil Insulation
- PointWorks Gen II
- Glasswool Insulation Products
- ZBond Plumbers Roof & Gutter Silicone
- Unleaded Petrol with Alcohol Oxygenates
- Rockwool Insulation Products
- Portland Cement CA001
- James Hardy – Fibre Cement

Plant/Tools/Equipment: (List plant and equipment to be used on

Maintenance Details: (Include maintenance on cranes, forklifts,

the job.)

- Scaffold and/or Light Duty Work Platform and/or Scaffold (mobile) and/or Edge Protection
- Extension ladder (Manufactured for industrial use with a load rating of not less than 120kg)
- Step ladder (Manufactured for industrial use with a load rating of not less than 120kg)
- **Petrol Fueled**
  - Elevator (Hoist)
  - Generator
  - Blower
- **Power Tools (electric):**
  - RCD power board
  - Cement Mixer
  - Electric Grinder
  - Extension Leads
- **Battery Powered**
  - Cordless Drill
  - Nail Gun
- **Hand Tools:**
  - Hammer
  - Chisel
  - Tile Cutter & Cutting Tray
  - Trowel
  - Shovel
  - Pliers
  - Spanner/shifter
  - Tile scorer
  - Pincers
  - Screw gun
  - Aviation snips
  - Sarking knife
  - Gutter stick
  - Broom
  - Pencil
  - Caulking gun
  - Weep holer
  - Tape & rule

electrical equipment etc.)

- Refer to supplier handover certificate
- All electrical tools & leads to be within current test & tagged period and visually checked prior to use.
- Ensure all equipment (plant and machinery, tools etc) are all maintained as per manufacturer's instructions and undergo regular preventive maintenance as required.
- Missing parts or guards must be in place before use
- Old equipment with excess wear & tear may be unsafe
- Use only plant and equipment that has been checked and inspected to be in a safe operating condition.

Method of identifying, assessing and prioritising risks

For each potential hazard identified a risk level will be determined by referring to the Risk Matrix below. The Hierarchy of Control will be used to manage the risks identified.

Step 1 Determine Likelihood – What is the possibility that the effect will occur?
Step 2 Determine Consequence - What will be the expected effect?
Step 3 Determine the risk level
Step 4 Hazard Elimination or Risk Control

Risk Matrix	**Step 1: Likelihood**				
Step 2: Consequences	**Certain to occur**	**Very Likely**	**Possible**	**Unlikely**	**Rare**
Fatality					
Permanent disability					
Lost time injury					
Medical treatment injury					
First aid injury					

Risk Rating: Likelihood / Consequence	**Risk Level**
This Risk Level 1 hazard has the potential to: • permanently disable or kill • cause major damage to the structure • have significant impact on the surrounding population and environment	**Level 1: High Risk**
This Risk Level 2 hazard has the potential to: • temporarily disable or seriously injure • cause minor damage to the structure • breach the site boundary and pollute local environment	**Level 2: Medium Risk**
This Risk Level 3 hazard has the potential to: • cause minor injury • be contained within the site boundary	**Level 3: Low Risk**

Hazard Elimination and Risk Control

The risk levels are ranked from highest to lowest using the following control measures.

Control measures should be considered and implemented in the following order with Level 1 the highest level of protection and level 3 the lowest:

Risk Rating Level	Preference of Control	Hierarchy of Control	Example of Control Measures to implement
Level 1	Highest level of protection	• Eliminate the hazard	• The most effective control involves elimination the hazard and associated risk. e.g. eliminating the risk of fall form height by working from the ground
Level 2	Acceptable level of protection if Level 1 is not reasonably practicable	• Substitute the hazard with a safer option • Isolate the hazard from people • Reduce the risk through engineering controls	• Use a different, less dangerous piece of equipment or replace chemicals with safer materials. • Separate noisy equipment by soundproofing or install guard rails to exposed edges and hole in floors • Add machine guarding or use trolleys or hoists to move heavy loads
Level 3	Lowest level of protection and should only be used as a last resort or in conjunction with other levels of control	• Reduce exposure to the hazard using administrative actions • Use personal protective equipment	• Establish work methods or safe work procedures for tasks or erect signage to warn people of the hazard • Limit the exposure to the hazard by implementing face masks, gloves, protective eyewear, UV protection and train people in their use.

Procedure (in steps):	Possible Safety or Environmental Hazards	RB	Control Measures to Reduce risk	RA	Responsible Officer
	NOTE: RB = Risk Rating **before** controls implemented - **RA** = Risk Rating **after** controls are implemented.				
Safe Work Procedures	A lack of knowledge may lead to potential near misses / incidents / injuries	L1	• Bristile Roofing Site Documentation Pack are to be a part of the PCBU Sub contractor's Safety Management System • All workers are to be made aware of the document and receive training on the procedures • The Safety Management System and Site Documentation Packs are to be made available to any worker on request.	L3	•
Safety Data Sheets	Exposure to hazardous substances/atmosphere which may cause Chemical burns, eye & skin irritations, inhalation & respiratory illness, nausea & poisoning	L1	• SDS are to be available to all workers to understand the ingredients, potential risks, effects, safe handling, storage and first aid remedies if affected by exposure to any hazardous substances. • SDS's are included as part of the Safety Management System	L3	•
Incident/ Accident Management & Emergency Response	Incident/Accidents on site.	L1	• Incidents, near misses & accidents must be reported immediately to the Primary Subcontractor (FIVE STAR QUALITY ROOFING PL Roofing). Where an injury or illness requires medical attention the Principal Contractor (builder) & Primary Subcontractor must be notified. • Serious incidents/near misses/accidents are to be reported to the WorkCover NSW. • Injured workers should be attended to in accordance with first aid & emergency response procedures. As trained by First Aid training Institutes. DRSABC • First Aid Kits (Type B) Must be maintained and available on site and each worker and officer must be aware of its location. • An incident/near miss/accident report must be completed by the PCBU Sub Contractor and recorded in a Register of Injuries Book. • Record of incidents, near misses or accidents must be reported, recorded & investigated by a FIVE STAR QUALITY ROOFING PL nominated representative to prevent a re-occurrence.	L3	•

Procedure (in steps):	Possible Safety or Environmental Hazards	RB	Control Measures to Reduce risk	RA	Responsible Officer

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Training Records, Consultation & Supervision	• Young & inexperienced workers are at greater risk & need specific supervision & training • Experienced workers require refresher training to re-in force their knowledge & understanding • All workers require training & supervision when changes are made due to legislation updates, changes to work procedures, new plant & equipment, PPE, policy changes etc.		• Induction training is required for all workers to be inducted into the PCBU Sub Contractors Safety Management System & signing off a record to that effect • All workers are required to be trained in the Work Method Statement (SWMSEA) & have signed a record. • All workers are required to be trained in a site specific Job Safety Analysis (JSA) & have signed a record to that effect • Consultation with workers to be available for checking understanding of requirements & reviewing feedback. • All workers must have an Industry Induction Card eg. a blue/white card. • All workers must have signed training records for general trade safe work practices including safe operation of plant & equipment & manual handling techniques. • All workers must attend Toolbox Talks & sign off on record. • All workers to sign off on PCBU Contractors Safety Policy. • All training records must be retained by the PCBU. • All employees of the workgroup will be adequately supervised by a competent & suitably qualified person		•
Use of electronic tools	• Injury due to contact with moving parts • Sprain and Strain • Dust • Noise • Eye injury		• Ensure equipment is in good working condition & electrical equipment is tested & tagged every 3 months. • Use a Residual Current Device (RCD) for all electrical equipment ensuring the RCD is tested via the test button before use. • Wherever feasible an angle grinder should not be used as a cutting tool. Where an angle grinder must be used, refer to your SWMSEA for Angle Grinder. • Ensure that guards are in place, and tools are appropriate for the job. • Use correct manual handling techniques • Worker must be trained in safe operation of the equipment. • Ensure that no other persons are in the working area. • Wear P1 dust respirator. • Wear ear plugs or muffs. • Wear safety glasses.		•

Procedure (in steps):	Possible Safety or Environmental Hazards	RB	Control Measures to Reduce risk	RA	Responsible Officer
	NOTE: RB = Risk Rating **before** controls implemented - **RA** = Risk Rating **after** controls are implemented.				
Planning & Analysing job site	Personal Injury: • Falls • Hit by falling object • Crushing • Hit by moving vehicle • Electric shock • Exposure to hazardous atmosphere • Manual Handling • Frame Collapse	L1	• Complete a daily site Job Safety Analysis (JSA) • Assess The Weather Conditions – Decide to Proceed or Not • Identify hazards • Assess Risks • Use site specific checklist to identify areas of risk to workers' health & safety. • Identify, assess the risks & select appropriate risk controls to effectively eliminate or reduce the risk. • Use hierarchy of controls procedure. • Additional hazards and control measures are to be outlined in Part 2 of this SWMSEA and consultation with all workers conducted prior to work commencing • Visually assess site & avoid areas containing power lines. ○ Keep a 5 metre NO GO ZONE between power lines and working area – If not possible suspend work within the 5 metre area and notify FIVE STAR QUALITY ROOFING PL Roofing Supervisor immediately for approval to continue work. ○ Between 4 – 6.5 metres conduct a specific assessment of the risk of electrocution and document specific control measures relating to this hazard. This may include the use of a spotter to observe & warn against the unsafe approach to overhead power lines • Ensure compliant edge protection guardrail, safety platform or scaffolding is in place if required before commencing work i.e. Greater than 2metres. • Visually check structural stability of the roof frame and ensure that it is fully completed & sufficiently braced before starting work	L3	•
Planning & Analysing job site cont....	ACCESS & EGRESS TO JOB SITE	L1	• Inspect Site for Trenches / holes / pits any area that could create concern. Use Hierarchy of controls to eliminate or lessen the risk associated.	L3	•
	EDGE PROTECTION INSPECTION	L1	• Inspection of Perimeter Edge Protection – Scaffold / Guard Rail	L3	•

Procedure (in steps):	Possible Safety or Environmental Hazards	RB	Control Measures to Reduce risk	RA	Responsible Officer
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Planning & Analysing job site cont....		L1	• Where works involve walking or carrying over an existing roof, check for fragile or brittle roof surface and control any identified risks. Temp walkways, planks, elevated work platform, wire mesh etc. where required. • Assess weather conditions i.e. excess heat or cold, wind, rain, frost and/or dew and take appropriate precautions which may include re-schedule of work date, additional protective clothing.	L3	•
Special Care must be taken where: • **Increased risk factors due to "other" conditions i.e. fully glazed and/or flat profile tile and/or surface moisture, oil, dust or other conditions that may make the roof slippery**	• Increased risk of falling objects • Increased risk of falling from or through roof	L1	• Work at a slower pace; use cutting trays when cutting tiles to prevent slips due to debris on the roof; carry half buckets mortar etc. • Ensure that others are not working underneath. • Ensure weather conditions are assessed prior to starting • Roof ladder may be considered if safe to do so.	L3	•

Procedure (in steps):	Possible Safety or Environmental Hazards	RB	Control Measures to Reduce risk	RA	Responsible Officer
	NOTE: RB = Risk Rating **before** controls implemented - **RA** = Risk Rating **after** controls are implemented.				
Special care must be taken where: • Roof pitch is above 26 degrees (but not greater than 35 degrees) for concrete or unglazed terracotta roof tiles	• Increased risk of falling objects • Increased risk of falling from or through roof	L1	• Ensure compliant scaffold, or certified platform is in place where pitch is greater than 26 degrees including sturdy mesh, sheeting or other material that extends upwards at least 900mm from: ○ The surface that is at the base of the edge protection; or ○ The toeboard • Work at a slower pace; use cutting trays when cutting tiles to prevent slips due to debris on the roof; carry half buckets mortar etc. • Ensure that others are not working underneath. • Ensure weather conditions are assessed prior to starting. • Battens to be secured to provide a safe work platform. • Roof ladder may be considered if safe to do so.	L3	•
Note: If roof pitch is greater than 35 degrees:	• Increased risk of falling objects • Increased risk of falling from or through roof	L1	Where the roof pitch exceeds 35 degrees the roof is an inappropriate surface to stand on even with guard railing or a catch platform. In these circumstances a job specific SWMSEA is to be completed including a system to prevent sliding and to prevent falls from the perimeter comprising 2 or more of the following: ○ A work position system ○ A roof ladder; or ○ A scaffold platform located at the roof edge	L3	•
Signs & Barricades	• Falling objects • hazardous work areas • plant	L1	• Ensure appropriate warning signs are in place to advise & warn the public & other trade's people ○ Barricade hazardous areas and/or erect "Danger" signage for persons working above and "Warning" signage for plant in use so all other trades and visitors are aware that Roofing Contractors are working.	L3	•

Procedure (in steps):	Possible Safety or Environmental Hazards	RB	Control Measures to Reduce risk	RA	Responsible Officer

NOTE: RB = Risk Rating **before** controls implemented - **RA** = Risk Rating **after** controls are implemented.

Access the Roof Identify safe access & egress; and set up ladder	• Contact with power lines: Electrocution • Fall from ladder. • Sprain / strain while setting up ladder • Fall from roof • Structure collapse	L1	Temporary Stair Access • Where temporary stair access is provided by principal contractor: ○ Tower access system provided will not be altered; ○ A check will be performed to ensure it is effective; ○ If defective rectification will be requested before using. Step Ladders • Use of a step ladder with a platform and handrails is recommended • If using a ladder that has no platform and handrails the user must not go on or above the 2nd step from the top • When working near a handrail on a ladder a safe distance must be maintained at all times from the handrails. • In cases where the ladder must be used at an edge it may be possible to increase the height of the handrail or install a screen to prevent falls over the rails Ladders • Ladders used for access, will be erected or a check performed to ensure the ladder provided is: ○ Rated industrial standard and in good condition ○ On a level and solid base ○ Secured at top and / or bottom to prevent movement. For short term use only or while securing the ladder a second person shall foot the ladder whilst in use ○ Extends a minimum of 1 metre above the area being accessed ○ Placed at an angle of between 70 to 80 degrees or at a 4 to 1 ratio ○ Use gutter guard to avoid sideways movement & secure ladder ○ Ladders are to be not more than 6.1m for a single ladder and not more than 7.5m for an extension ladder	L3	•

Procedure (in steps):	Possible Safety or Environmental Hazards	RB	Control Measures to Reduce risk	RA	Responsible Officer
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			Ladders cont.. • 3 points of contact maintained with ladder at all times. ie 1 foot and 2 hands or 2 feet and 1 hand must be maintained at all times whilst on the ladder • When on a ladder the user must be facing the ladder at all times • Any tools or equipment to be carried up the ladder must be in a backpack, tool belt or other means to ensure that the users hands remain free • DO NOT place the ladder in front of doorways, on pathways or driveways where people, vehicles and equipment could collide with the ladder • DO NOT climb scaffolding to access the roof • Always ensure that the ladder is positioned to avoid overreaching from the ladder, all work should be in easy reach to avoid overbalancing and subsequent falls. • Prior to getting on a ladder the user must ensure that his shoes are fully enclosed and free of mud, grease or other contaminants that would make shoes slippery		
Mark & Set out Roof. (Timber Trusses at 600mm centres or less)	Fall from or through roof.	**L1**	• The rafter lengths of the roof are measured from fascia line to ridge. • Ensure that fall protection is adequate. • Ensure that openings & stairwells are protected. • Use a gauge rod to mark up with the correct set out points for the rafter. • Use marks or pin out nails for setting & positioning battens. • Where trusses are installed at 600mm centres or less, position the body so that the feet are on adjacent trusses at all times and walk to the apex of the roof in order to mark out alternatively walk carefully on ceiling joists or bottom chords.	**L3**	

Procedure (in steps):	Possible Safety or Environmental Hazards	RB	Control Measures to Reduce risk	RA	Responsible Officer
	NOTE: RB = Risk Rating **before** controls implemented - **RA** = Risk Rating **after** controls are implemented.				
Mark & Set out Roof. (Steel Trusses) Special Care must be taken where: Increased risk due to metal truss roofs	• Fall from or through roof. • Slippery surface • Electrocution • Sharp edges •	L1	• The rafter lengths of the roof are measured from fascia line to ridge. • Ensure that fall protection is adequate. • Ensure that openings & stairwells are protected. • Gloves are to be worn especially in extreme weather conditions • Use a gauge rod to mark up with the correct set out points for the rafter. • Use marks, rivets, screws or pin out nails for setting & positioning battens. • Where the roof pitch is such that a person is unable to easily walk on the top chord and/or there is presence of moisture, dew, frost or dust marking/setting out should be carried out by using one or a combination of the following controls: ○ Work from bottom chord of truss or other suitable platform, rather than top of the rafter if safe to do so. ○ Mark out while installing battens sequentially from the perimeter upwards in a manner that controls the risk of a fall through the roof. • Where trusses are installed at 600mm centres or less, position the body so that the feet are on adjacent trusses at all times and walk to the apex of the roof in order to mark out alternatively walk carefully on ceiling joists or bottom chords.	L3	•

Procedure (in steps):	Possible Safety or Environmental Hazards	RB	Control Measures to Reduce risk	RA	Responsible Officer
	NOTE: **RB** = Risk Rating **before** controls implemented - **RA** = Risk Rating **after** controls are implemented.				
Fit & Cut Battens – Timber battens / timber trusses / rafters	• Fall from or through roof • Sprains & strains • UV and heat • Splinters • Nail gun could injure user or other workers • Electrocution • Electrical leads	L1	• Ensure that open voids are controlled using secured battens to provide a safe work platform. • Do not stand on metal fascia, fixing brackets are weak or may not be secured correctly. • Use correct manual handling techniques. • Do not allow personnel to work below while working on roof. • Ensure equipment is in good working condition & electrical equipment is tested & tagged. • Wear appropriate PPE i.e. hand & eye protection. • Ensure nail gun warning sign is erected to prevent persons entering work area • Discard unsuitable battens. • Battens to be stacked on end around roof perimeter in a safe position to prevent slipping. • Battens should always be lifted up behind the fascia & gutter to avoid damage to the gutter. • Install battens sequentially up to the apex of a roof in a manner that controls the risk of a fall through the roof. i.e. ensure there is at least one secure batten at waist level or above to minimise the risk of a fall. • Do not over reach or stretch beyond a safe distance. • Use a Residual Current Device (RCD) for all electrical equipment • Suspend electrical leads off the ground and pass through non-conductive area at base of switchboard • Compressor to remain within property boundaries • Ensure nail guns & power saws are in good order & only used by trained workers.	L3	•

Procedure (in steps):	Possible Safety or Environmental Hazards	RB	Control Measures to Reduce risk	RA	Responsible Officer
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Additional care when fitting - Timber Battens / Steel trusses / rafters	• Fall from or through roof. • Slippery surface • Electrocution • Sharp edges	L1	• Where the roof pitch is such that a person is unable to easily walk on the top chord and/or there is presence of moisture, dew, frost or dust marking/setting out should be carried out by using one or a combination of the following controls: ○ Work from bottom chord of truss or other suitable platform, rather than top of the rafter if safe to do so. ○ Mark out while installing battens sequentially from the perimeter upwards in a manner that controls the risk of a fall through the roof. • Identify the gauge of the steel truss and ensure the gun nail and nail gun are appropriate to the thickness of the steel • Ensure all sharp objects are identified, removed or bent over • When walking on steel trusses/rafters stand on the intersection of the rafter and tile batten for stability. Crawl boards or wooden planks may be considered for use as a work platform if safe to do so.	L3	•
Additional care when fitting - Steel Battens / Timber trusses / rafters	• Fall from or through roof. • Slippery surface • Electrocution • Sharp edges	L1	• Wear appropriate PPE i.e. hand & eye protection • Ensure battens are lapped sufficiently over rafter to support weight of worker and materials	L3	•

Procedure (in steps):	Possible Safety or Environmental Hazards	RB	Control Measures to Reduce risk	RA	Responsible Officer
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Additional care when fitting - Steel Battens / Steel trusses / rafters	• Fall from or through roof.
	• Slippery surface
	• Electrocution
	• Sharp edges
		L1	• Wear appropriate PPE i.e. hand & eye protection
			• Where the roof pitch is such that a person is unable to easily walk on the top chord and/or there is presence of moisture, dew, frost or dust marking/setting out should be carried out by using one or a combination of the following controls:
			  ○ Work from bottom chord of truss or other suitable platform, rather than top of the rafter if safe to do so.
			  ○ Mark out while installing battens sequentially from the perimeter upwards in a manner that controls the risk of a fall through the roof.
			• Identify the gauge of the steel truss and ensure the gun nail and nail gun are appropriate to the thickness of the steel
			• Ensure all sharp objects are identified, removed or bent over
			• When walking on steel trusses/rafters stand on the intersection of the rafter and tile batten for stability. Crawl boards or wooden planks may be considered for use as a work platform if safe to do so.
			• Ensure battens are lapped sufficiently over rafter to support weight of worker and materials
			• Ensure electrical leads are not suspended over sharp edges
				L3	•

Installation of Anti-ponding board (APB) – if specified	• Fall from or through roof • Slippery surface • Sharp edges	L1	• Where feasible the APB should be installed from a ladder or internal or external work platform. • Where the APB must be installed from the roof, ensure that the bottom batten is in position to minimise the risk of fall • When handling or cutting metal APB be aware of sharp metal edges • Hand protection should be worn if handling sharp edges	L3	•

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Fit Sarking (if specified) Position & roll out sarking over the rafters / trusses.	• Falls • Reflected glare from sarking or wind blowing sarking out of position. • Sprains and strains. • Puncture injury from nail gun	L1	• Ensure that fall protection is in place • UV protection & sun glasses must be worn. • Use correct manual handling techniques for lifting rolls. • Check that no one is working below while installing sarking. • Weather conditions assessed & suitable controls in place. • Nail gun operator is trained to safely operate equipment. • Ensure sarking is laid with the "anti-glare" surface facing up. • Do not stand on metal fascia, fixing brackets are weak or may not be secured correctly • Roll out one length of sarking at a time (starting at the bottom of the rafter) & nail battens securely on top of the sarking to secure it.	L3	•
Set Up Elevator Assemble elevator on the ground, lift into position, secure the elevator and erect "warning" signage	• Slip, trip fall • Sprains and strains • Personnel struck by falling elevator • Person struck by tiles falling from elevator • Falling objects	L1	• Inspect the elevator and associated equipment for cracks or damage that could weaken the elevator. • Repair or modify the elevator by manufacturer-approved methods. • Ensure nip and pinch points are appropriately guarded so that fingers, clothing hair etc cannot be drawn into pinch points. • If motor is electric ensure test tag is current and there is no damage to the lead or plug connection. • Electrical leads are to be suspended • Test that Emergency Stops operate effectively • Ensure access is safe and without trip hazards. • Use correct manual handling practice; use two or more people as required; use ropes and pulleys if available. • Tie the elevator into position on the roof. • Apply brakes to the wheels of the elevator. • Ensure that elevator is correctly secured on even ground before operating. • Provide signage/ tape to prevent access under the elevator. • Always switch the motor off and disconnect the power supply before adjusting drive belts. • If motor noise greater than 85db (check operating manual), then wear hearing protection if working near motor	L3	•

Procedure (in steps):	Possible Safety or Environmental Hazards	RB	Control Measures to Reduce risk	RA	Responsible Officer
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Load and lay roof tiles
Identify safe path from tiles to elevator, and distribute evenly over the roof.
	• Fall from or through the roof
	• Sprains and Strains
	• Cuts and/or irritation from handling roof tiles
	• Trips or falls on ground
		L1	• Ensure foot and hand is worn when loading elevator.
			• Ensure edge protection is in place, ensure that all battens are fixed securely do not walk on middle of batten or valley irons.
			• Clear any building materials from the loading area.
			• Ensure packaging is kept clear of the work area, as pallets are unstacked.
			• Tape off the loading zone.
			  • No access through dwelling while the roof is being loaded.
			  • Use barrier tape if necessary
			• Pallets of tiles should not be double stacked.
			• Ensure non slip shoes are worn at all times when working on roof.
			• Load lifts of maximum of 5 tiles onto the elevator. Taking into consideration the weight of individual tile profiles to determine the number of tiles to be loaded.
			• Ensure the flow of tiles is at a comfortable rate and within capabilities for the loaders on the roof
			• Use safe lifting practices, minimise twisting by moving whole body rather than just from waist, use batten trolley where possible; only lift what you are comfortable to carry without straining using correct manual handling technique.
			• Workers will not walk on the middle of a batten between rafters / trusses - walk on junction of rafters & battens
			• Check slipperiness of tiles for walking on surface eg. wet, damp, oily, frosty etc may require extra control measures.
			• Distribute tiles across the roof and rest on the battens - Load the roof evenly.
			• Gloves should be worn to minimise cuts, abrasion and pinch injuries to hands. Damaged Terracotta can have very sharp edges.
			• Large stacks of tiles not to be left unsecured on the roof
				L3	•

Procedure (in steps):	Possible Safety or Environmental Hazards	RB	Control Measures to Reduce risk	RA	Responsible Officer
	NOTE: RB = Risk Rating **before** controls implemented - **RA** = Risk Rating **after** controls are implemented.				
Load out roof on a Metal Frame (Extra care to be taken	• Fall from or through the roof • Cuts & abrasions • Electrocution	L1	• Ensure all sharp objects are identified removed or bent over • When walking on metal frame roofs stand on the intersection of the rafter and tile batten for stability. Crawl boards or wooden planks may be considered for use as a work platform if safe to do so	L3	•
Cut in hips and valleys	• Dust from cutting tool. • Electrocution power grinder • Cut tiles could fall & injure workers below roof line.	L1	• Use manual tile cutter. • Use PPE e.g. P1 dust mask, hearing & eye protection. • Ensure other workers are not in the area before commencing. • Have all electrical equipment tested and tagged; use only approved earth leakage protection device (RCD) • Use a cutting tray to collect off cuts. • Remove debris safely to ground in neat piles in selected safe areas.	L3	•
Bedding and Pointing Ridge capping	• Contact with pointing material causing skin/eye irritation • Sprain/strain • Fall from roof • Electrocution	L1	• Use UV protection, gloves & eye protection while handling cement based pointing mixes. Refer to SDS. • Mix mortar using fatty loam and cement in a 4:1 ratio • Keep buckets to 10 litre or less volume if possible, use correct manual handling practices. • Use the elevator or a rope to lift mortar buckets to the roof. • Use a bedding frame as a guide to lay down the mortar and keep ridge tiles straight. • Weather conditions to be assessed for wet/slippery surface. • Use steel rod to form the weep holes in the bedding	L3	•
Cleaning down Wipe down ridges with a dry rag, blow or sweep off excess debris from roof and gutters, remove rubbish	• Electrocution • Debris & dust contaminating others • Fall from roof • Workers below could be hurt.	L1	• Do not work within 5 metres of power lines; ensure all equipment is in good working order, use only approved earth leakage protection device (RCD) • Check that no personnel are working below roof line. • Ensure all rubbish is removed from site or placed in the bin provided on site	L3	•
Installation of Painted Lead Sheet (Acryflash)	• Sprains and strains • Lead poisoning • Fall from roof	L1	• Use correct manual handling technique, obtaining assistance if required; only transport required amount of material to roof • Always wear gloves when handling lead & wash hands after use. Refer to SDS	L3	•

References:

Work Health & Safety Act 2011
Work Health & Safety Regulation 2011
Hazardous Manual Tasks Code of Practice 2011
How to Manage Work Health and Safety Risks Code of Practice 2011
Managing Noise and Preventing Hearing Loss at Work Code of Practice 2011
Managing the Risk of Falls at Workplaces Code of Practice 2011
Work Health and Safety Consultation, Co-operation and Co-ordination
First Aid Code of Practice 2004
Hazardous Chemicals Code of Practice 2003
Plant Code of Practice 2005
National Standard for Plant (NOHSC: 1010:1994)
NSW DEIR Building and Construction Industry Workplace Health and Safety Guide
AS/NZS 4994.1:2009 : Temporary edge protection – General requirements
AS/NZS 4576:1995 : Guidelines for scaffolding
AS/NZS 1576.1:2010 : Scaffolding – General requirements
AS/NZS 1337.1:2010 : Personal eye protection – eye and face protectors for occupational applications
AS/NZS 2210.1:2010 : Safety, protective & occupational footwear – Guide to selection, care & use
AS/NZS 3760:2010 : In-Service safety inspection and testing of electrical equipment
AS/NZS ISO 31000:2009 : Risk management – Principles and guidelines

SAFE WORK METHOD STATEMENT & ENVIRONMENTAL ANALYSIS – Part 2
Additional Hazards Identified on this site

Procedure (in steps):	Possible Safety or Environmental Hazards	RB	Control Measures to Reduce risk	RA	Responsible Officer
	NOTE: RB = Risk Rating **before** controls implemented - **RA** = Risk Rating **after** controls are implemented.				
ROOF MAINTENANCE **USE OF SAFETY HARNESS**	• Fall from or through roof • Slippery surface Sharp edges • Electrical Wires	L1	• Complete JSA Risk Assessment of project • Inspect Harness for signs of damage (Stop Job if Damaged) • Confirm all workers have High Safety Training • Erect Ladder 4 – 1 Ratio – Secure Ladder to Roof. • Accent Roof directly above Ladder in Straight Line • Uplift Tile and fix Harness to Roof Truss • Inspect Surrounds and make certain harness rope will catch worker by keeping a short lock hold in place • Use correct manual handling techniques for lifting • Ensure weather conditions are assessed prior to starting • Make Certain all Live Power is greater than 5 Lm away • Have emergency worker within communication distance as so communication can be heard between internal and external workers.	L3	•
ROOF MAINTENANCE **Working in Roof Cavity**	• Fall through Ceiling • Heat Exhaustion • Electrical Wires • Confined Space	L1	• Make certain you transverse across ceiling timbers and or purpose placed boards – do not step on any gyprock sheets. • Make certain that you are only in the cavity for a short inspection and if longer periods are required have ventilation areas open (tiles pushed up) • If entering roof cavities always turn of the mains power. • Have emergency worker above in open surface where communication can be heard between internal and external workers.	L3	•
ROOF MAINTENANCE **Ascending Roof Product to the Roof**	• Fall from Ladder • Material Dropping	L1	• Make certain all Safety Precautions are catered for. • Utilize Best Practice to move tiles to the roof • Avoid heavy humping of tiles • Avoid difficult body twists • Never ascend ladders carrying material without complete control of contact to the ladder • Where Roof Pully systems are used make certain correct fixtures are in place prior to using.	L3	•

SAFE WORK METHOD STATEMENT & ENVIRONMENTAL ANALYSIS – Part 3

Personal Qualifications and Experience required for the job:	**Duties and Responsibilities of those employees undertaking the task:**	**Training Required to Complete the Work:** (All employees must be trained in relevant procedures.)
• White Card • Working at heights Certificate • First Aid • Roof Tiling Licence	• White Card – all employees on site • First aid • Conformance with SWMSEA and project site rules • Compliance with WHS Legislation	Nature of the hazards Site-specific inductions. **Training in this SSWMSEAEA** First Aid Emergency Response Care and use of PPE

EMPLOYEES Sign-off

This SWMSEA has been developed through consultation with employees (workers). I have read the above SWMSEA and I understand its content. I confirm that I have the skills and training, including relevant certification to conduct the task as described. I agree to comply with safety requirements within this SWMSEA including safe work instructions and Personal Protective Equipment described. These workers understand that they must stop work if they are unable to comply with the SWMSEA or if they consider a situation to be unsafe to either themselves or others that could be effected by this work.

Name	Qualifications	Date	White Card	Signature
Mark Wallace	Licenced Tiler	14/4/16	CGI00808028SEQ1	
Carlos Balzan	Licenced Tiler	14/4/16	CGI00772394SEQ1	
Bradley Hunt	1st yr Apprentice	14/4/16	CGI0296820SEQ02	
Jacob Scott	2nd yr Apprentice	14/4/16	CGI01392472SEQ1	
Sean Fell	Licenced Tiler	14/4/16	CGI0116590SEQ01	
Charles Tremewen	1st yr Apprentice	14/4/16	CGI0260086SEQ01	
Malakai Pahulu	Licenced Tiler	14/4/16	CGI0177638SEQ01	
Phillip Stanton	3rd yr Apprentice	14/4/16	CGI0129727SEQ01	

Name	Qualifications	Date	White Card	Signature
Tamamutu Marino	Licenced Tiler	14/4/16	CGI0223629SEQ01	
Vailagi Leota	3rd yr Apprentice	14/4/16	CGI0192181SEQ01	
Wesley Tuaaumatatoa	Licenced Tiler	14/4/16	CGI01406330SEQ1	
Kelly Martin	1st yr Apprentice	14/4/16	CIC0336703	
Molipopo Leota	2nd yr Apprentice	14/4/16	CGI0225229SEQ01	
Ryan Doyle	3rd yr Apprentice	14/4/16	CGI0119076SEQ01	
Bradlee Farrer	1st yr Apprentice	14/4/16	000528890201	