## Safe Work Method Statement – Work at Heights

This safe work method statement is generic in nature. All PCBU's when undertaking high risk construction work are to have in place a Safe Work Method Statement (SWMS). This SWMS can be used as a guide in developing your SWMS. Where there are differences in the control measures to employed between your and this SWMS the higher of the two control measures are to be implemented – this or your own SWMS. This SWMS needs to be reviewed against site conditions upon commencing work. Where site conditions prevent works to be carried out in accordance with this SWMS than another is to be written and Site Supervisor notified.

Name of PCBU/Employer			Name of Principal Contractor	Bay Building S	ervices		
Work Activity:		Working at height and Being Struck by Falling Objects	Work Location:				
High Risk Construction Wor	rk:		Hazards : Fall from height, struck by	Site Supervisor			
			falling object	Emergency Contact:	1300 766 216	Contact No	
Date of SWMS			01/06/2023	Review Date			
Have workers been consult	Have workers been consulted about the SWMS?		All workers are required to be consulted with regards to the SWMS and control measures contained in the SWMS.				
<b>Person Responsible</b> for ensuring compliance with SWMS			Different PCBU's/Employers and Contractors will encounter different High Risk activities. All PCBU's/Employers are responsible for reviewing this SWMS against site conditions and ensure work occurs in accordance with the SWMS.				
Person(s) Responsible (for r	Person(s) Responsible (for reviewing the SWMS)			SWMS and apply the cont (e. Where works can not c Site Supervisor.			
Work Step Hazard for Works			Control Measures for the Hazards				
impair worksthe SWMS.• Discuss site specific works• Ensure all employees at		Discuss site specific works with the Site site specific hazards Ensure all employees are made aware If SWMS are to be changed copy is to b	e Supervisor reviewing site of any site specific hazards	signage, Safety to works and thi	Management P is SWMS	lan, for	

Use of Scaffold	Fall's from height	Scaffolding
		For fall-heights >2 m, the installation of heavy duty scaffolds with kick boards & mid rails installed by licensed scaffolder is common on construction sites. The scaffolder must supply a certificate of completion (ScaffTag) that verifies completion of the scaffold to Standard.
		No work is to be carried out (other than that of installing and dismantling of the scaffold) from the scaffold unless the scaffold, or the relevant part or portion of the scaffold, is complete
		To prevent collapse, do not load platforms with more than 650 kg per bay.
		No scaffold alterations, except by licensed scaffolder. Any fault or non-compliance shall be reported to the Supervisor.
		Platforms only to be accessed by stair or ladders.
		Scaffold is to be maintained so that it's meets compliance with the installer's guidelines. All trades are to ensure that the scaffold is maintained if they are to use it as part of their work. Where defects are noted such as missing hand rails, toe boards, or mid-rails report these to the Supervisor. Trades should never remove scaffolding components to the leave the scaffold unsafe, which includes handrails, tow boards, braces or tie bars.
		Mobile scaffold <4m in height is to be erected by a competent person. Outriggers and locking mechanism are to be in place prior to use. Ensure mid-rails and top rails are maintained. Where there is a risk of items falling on others below create a non-go zone and/or have toe board installed.
		Mobile scaffold >4m is to be erected by a licencsed scaffold installer. Movement and modification of the scaffold is to only occur via a licenced scaffold installer. Ensure mid-rails and top rails are maintained. Where there is a risk of items falling on others below create a non-go zone and/or have toe board installed.
Erection of Scaffold Safety	Personal injury. Falls. Electrocution Scaffold overturn	<ul> <li>Training:</li> <li>Only personnel with a high risk scaffold licence are able to install scaffold in excess of 4m in height</li> <li>Competent and trained personnel are to install light duty scaffold below 4m in height</li> </ul> Foundations:
	Incorrect Assembly of scaffolding. Insufficient planks.	<ul> <li>Scaffolding foundations MUST be able to carry and distribute all the weight of the scaffold, including any extra loads.</li> <li>Unstable surfaces such as loose, disturbed ground, and filled areas may require the use of sole boards and base plates to evenly distribute the load of the scaffold to the supporting surface. The sole plates</li> </ul>
	Mismatched parts. No guard rails. Fittings unsecured.	are to be made of hardwood and measure 400mm x 200mm. Base plates are to be centred on the sole boards
		<ul> <li>Ensure:</li> <li>Scaffold is positioned where it will not be struck by site traffic.</li> </ul>

		<ul> <li>Scaffold is not positioned where it may enter the scaffold no go zone around overhead power lines – 6m from the power lines.</li> <li>Fall prevention controls:</li> <li>Fully decking each lift by: <ul> <li>Positioning a full deck of planks least 450 mm wide at each lift.</li> <li>Positioning planks on the next lift whilst standing on a full-decked platform.</li> <li>Leaving each lift fully decked in place until it is dismantled.</li> <li>Installing internal guard rails where adjacent structure is still to be built.</li> <li>All fittings should be securely tightened</li> </ul> </li> <li>Notes: <ul> <li>Components - All scaffold components should be installed as the scaffold is erected. For example, the installation of: <ul> <li>(a) all bracing and ties; and</li> <li>(b) guy ropes or buttresses.</li> </ul> </li> <li>Ladders to be used must be: <ul> <li>Installed inside the scaffolding.</li> <li>Of a commercial quality. (ie not domestic).</li> <li>Secured at both the top and the bottom.</li> <li>Elevated at a correct angle. (eg - 4 high to 1 across the base.)</li> <li>Extended a safe distance above the landing level. (Ensures safety when climbing or descending as people have something to hold onto.)</li> </ul> </li> <li>Free from damage. (If they have been damaged they must be replaced.)</li> </ul></li></ul>
Fall through window openings	Fall from height	Guardrails for Window and Door Openings in External Wall Frames where fall > 2m

		<ul> <li>Window and door openings in external wall frames with a fall height &gt;2m (both on first floor &amp; second floor) are to be fitted with guardrails before the frames are raised. The handrail shall be set at approximately 900mm to 1100mm from the floor and the mid rail 500mm.</li> <li>Additional guardrails are required in window openings and door openings when work is being carried out on a trestle scaffold or ladder. Standard height guard rails are too low to prevent a person from falling through the window or door opening whilst working on a trestle scaffold. Additional guard rails are to be installed at 450mm centres from the first guard rails are to be installed at 450mm centres from the first guard rails est between 900mm and 1100mm.</li> <li>Where guard rails are not in place and works are occurring near to open window openings contact is to be made with the Site Supervisor</li> </ul>	
Use of ladders	Fall from height	Ladders Ladders are at times a practical tool to gain access to heights for short durations or places where access can not	
		be gained by any other means. General guidelines for the safe use of ladders are as follows:	
		<ul> <li>A person should always have two hands free to ascend and descend a ladder (i.e. all material and tools which cannot be safely secured from the worker's belt should be independently transferred or hoisted to the work location).</li> </ul>	
		• Ladders are to be secured against movement and are to be supported on a firm level and non-slip surface.	
		<ul> <li>All work from a ladder should be performed while facing the ladder.</li> </ul>	
		<ul> <li>A person's feet should not be higher than 900mm from the top of a ladder.</li> </ul>	
		<ul> <li>There should be no danger of any plant coming into contact with a ladder.</li> </ul>	
		<ul> <li>No person on a ladder should work over another person.</li> </ul>	
		<ul> <li>Only one person should be on a ladder at any time.</li> </ul>	
		<ul> <li>Ladders should not be used in access areas or within the arc of swinging doors.</li> </ul>	
		<ul> <li>Work involving restricted vision or hot work (such as welding or oxy-cutting) should not be performed from a ladder.</li> </ul>	

<ul> <li>Ladders should not be setup on scaffolding or elevating work platforms to gain extra height.</li> </ul>
<ul> <li>Small, light loads of tools or materials easily handled by one person only may be raised or lowered with a hand line or carried on a waist belt.</li> </ul>
<ul> <li>Ladders should not be handled or used where it is possible for the ladder or the user to come into contact with electrical power lines. Metal or metal-reinforced ladders should not be used in the vicinity of live electrical equipment. Such ladders should be permanently marked in a prominent position with "DO NOT USE WHERE ELECTRICAL HAZARDS EXIST", in accordance with Australian Standards. Fiberglass or non conductive ladders are to be used for all electrical work</li> </ul>
<ul> <li>The use of power tools on a ladder should be restricted to those which are easily operated one-handed</li> </ul>
Single and Extension Ladders (see following diagram)
Single and extension ladders are to:
• Be placed at a slope of 1:4,
Extend 900 mm above the stepping off point.
Be footed and/or secured at top.
Stepladders
<ul> <li>Stepladders should only be used in the fully opened and locked position.</li> </ul>
• A person's feet should be no higher than the third tread (900 mm) from the top plate.
<ul> <li>A stepladder shall not be used near the edge of an open floor or penetration where, if the ladder toppled, a person could fall over that edge.</li> </ul>
<ul> <li>Work should not be carried out on ladders unless the task is minor</li> </ul>

		At least 900 mm overhang (access purposes) Secured at top Hoist tools etc, in bucket when at top Both hands on rails Always face Ladder Eefore climbing, test by jumping on bottom rung
Work on, around, or above void opening	Fall from height	<ul> <li>Figure 8 Example of acceptable ladder use</li> <li>Void Protection</li> <li>Noid platforms are installed to cover openings such as stair voids, veranda porticoes, and swimming pool cavities.</li> <li>Access through the void is gained via an opening to accommodate an Industrial Grade Ladder; the opening must be kept closed at all times unless being accessed.</li> <li>The void protection for the first floor is installed prior to the laying of flooring and the erection of the 2<sup>nd</sup> floor wall frame. If the void is not installed at this time contact is to be made with the Supervisor for installation. Work should not commence until the void is in place.</li> <li>Where void protection can not be installed guard railing can be installed around the void in the following manner after consulting the Site Supervisor:</li> <li>Using a proprietary method of edge protection guard railing</li> </ul>

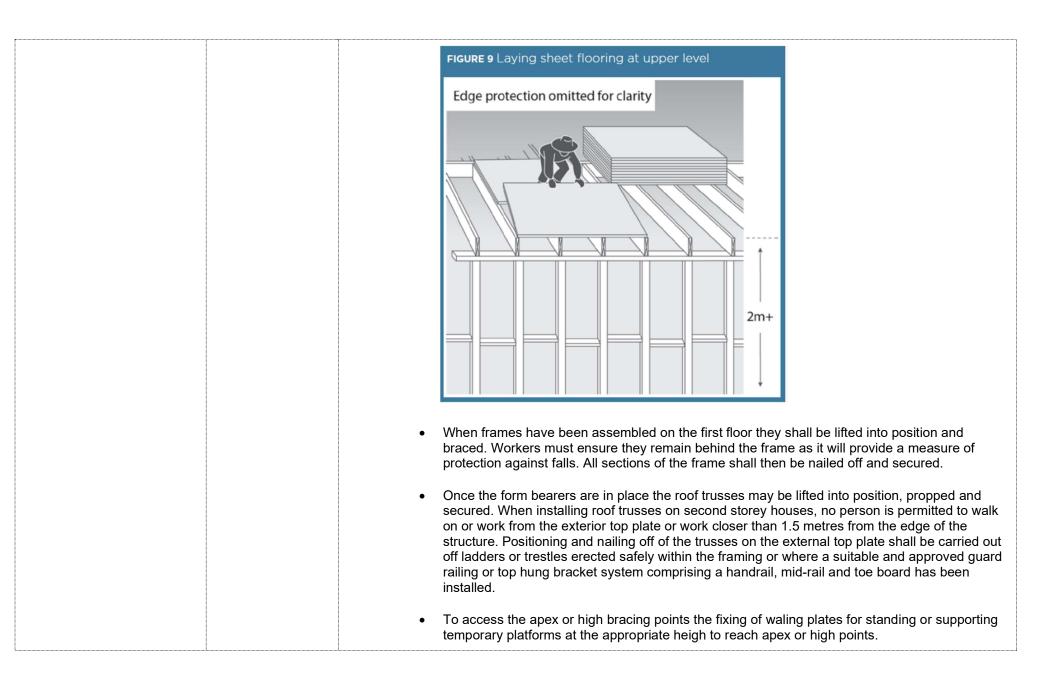
		<ul> <li>incorporate a top-rail 900–1100 mm above the working surface</li> <li>if works occurring above void (e.g. roof work or truss install) a platform must be installed. a top-rail 900– 1100 mm above the working surface</li> <li>If the void requires modification due to construction issues contact must be made with the Supervisor.</li> </ul>
Works on or edge of structure with unprotected edge	Works on or edge of structure	
Roof Truss Instalaltion – Single Storey House Construction	Fall >2m	<ul> <li>Truss installation poses a risk of fall when working above 2 metres in height. The erection of trusses maybe undertaken from internal wall top plates or from scaffold planks supported on internal wall top plates providing:</li> <li>No person works closer than 1.5 metres to the external wall, including gable end walls</li> <li>Planks are adequately supported across their spans</li> <li>No person is exposed to the risk of a fall into a stairwell or other void.</li> <li><i>Single Storey Houses</i></li> <li>Once wall frames are erected, roof trusses are to be installed using either of the following methods:</li> </ul>

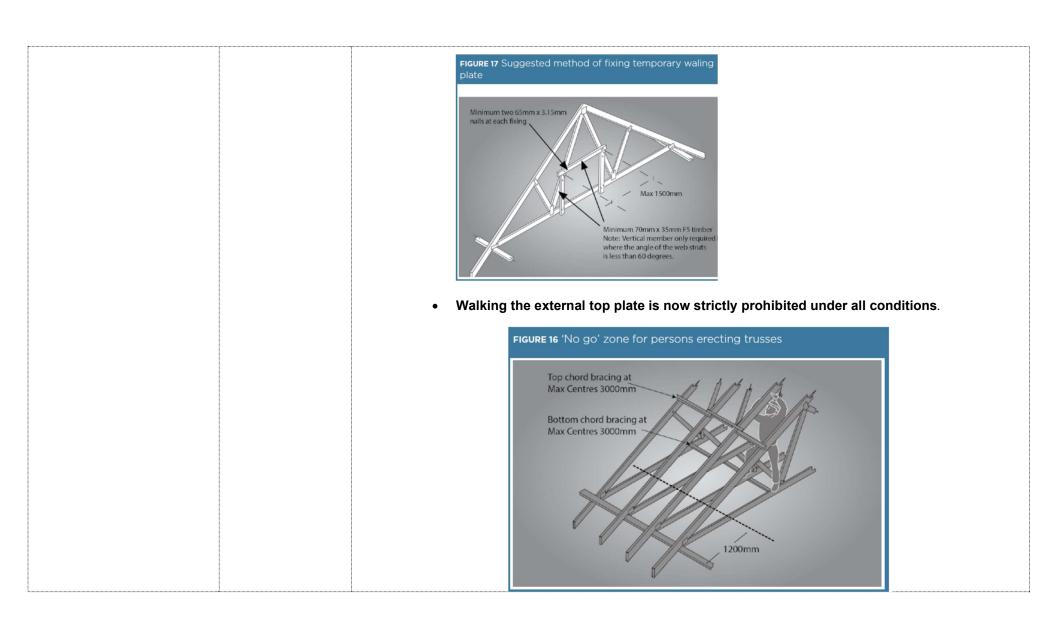
	Either:
	<ul> <li>Working off an approved external hanging bracket system using planks and fitted with a handrail, mid-rail and toe board complying with the Code of Practice. Where the plank is located at a height of less than 2 metres, no guard railing is required.</li> <li>By working from suitable trestles, or stepladders and planks set up on the slab. The work may also be done solely from a suitable industrial grade stepladder as long as the worker does not work at a height greater than 2 metres above the concrete slab.</li> <li>Or:</li> </ul>
	<ul> <li>By securely nailing a cleat across between two studs on the internal walls, where they join external walls, 1200 mm down from the top plate i.e. at the level of the noggin, and resting one end of the plank on the cleat and the other end on a stepladder. Planks shall not exceed the following spans without being supported where they overlap.</li> <li>38 mm thick = 1.5 metres</li> <li>50 mm thick = 2.0 metres</li> <li>63 mm thick = 2.5 metres</li> </ul>
	Where planks have to be supported to meet these span requirements, the support shall be sufficient to carry the required weight and shall not be accidentally dislodged once in place
Frame & Roof Truss Installation Double Storey Hosue	Double Storey Houses

• Second floor joists are to be installed off trestles and planks set up on the slab or lower floor. Any opening in windows or voids where there is a fall risk >2m must have either guard railing or fully enclosed platform installed.

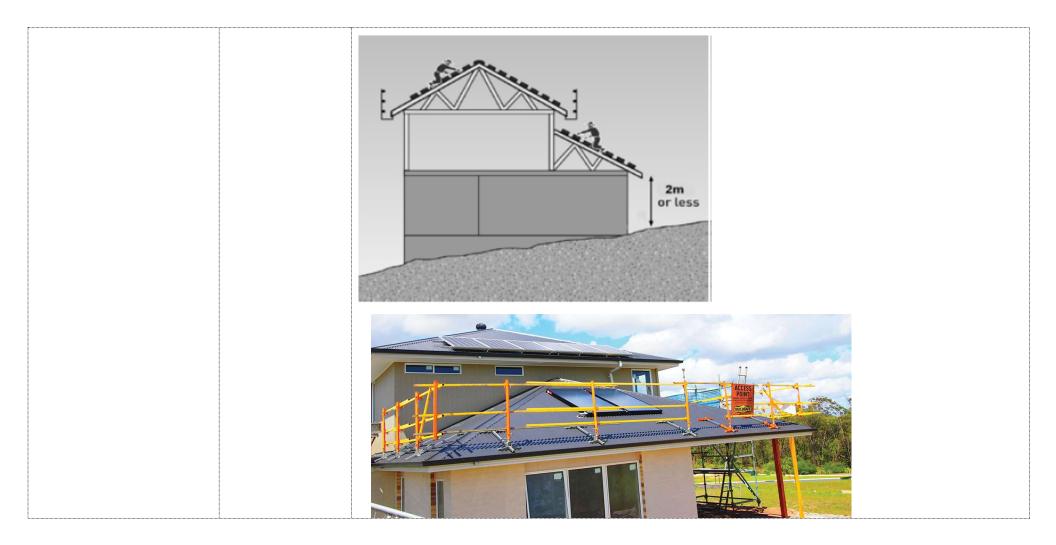
FIGURE 12 Installing ceiling or upper level floor joists

- Void protection is to be installed prior to the laying of flooring and before second floor framing is constructed and lifted into place. It is not acceptable for the framer to start work on the second floor framing whilst waiting for the void to be delivered, the void <u>must</u> be installed <u>before</u> any work on the second floor commences.
- First floor edge protection is to be installed.
- A section of sheet flooring shall be installed along the edge closest to the access point. It is not acceptable or safe for carpenters to work off the open floor joists. Where it is not possible for the flooring pack to be delivered close to the access point an experienced tradesperson may access the pack via walking the joists and lay the first sheet.
- Once the first section of flooring has been secured the remaining sheets shall be lifted on to the first section and installed from the sheeted side across, always working off a secured sheet.





Use of fixed existing structure as edge protection	Fall from height	Fall from height from one level to another where a fixed structure (e.g. parapet) in place will only be considered if that structure if of a sufficient strength and height to prevent a fall. In most cases such structure would need to be in excess of 900mm in height and have a midrail or fully enclosed structure. Where this is not the case please contact your site supervisor.	Roof	Parapet
Works using lower section roof as work platform on doubles (e.g. alfresco & rumpus roofs)	Falls from height, Slips, trips & falls	<ul> <li>Works using the completed roof surface on rear sections of doubles (less than 35 degrees pitch) is to have reguardrail and physical fall protection installed for this type of works.</li> <li>The railing is to be installed by an accredited installation company to conform to Industry Standard.</li> <li>The fall protection measure should be installed on the roof where: <ul> <li>the fall from the height of the edge of the roof is greater than 2 metres;</li> <li>The roof is clad in concrete, semi-glazed tiles and the slope is more than 26 degrees; or is clad in medick or glazed terracotta tiles and the slope is more than 23 degrees; and</li> <li>Any other situation where the risk factor is increased eg. adverse weather conditions such as rain, he wind, ice which may affect the roof.</li> </ul> </li> <li>Workers are to inspect the guard railing prior to works commencing.</li> </ul>		m to Industry Standard. es; than 26 degrees; or is clad in metal s; and



Work on roof where roof	Fall from height	Perimeter Fall Protection & Roof Work	3 rails
guard rail can be installed		Physical fall protection railing is often installed to control the fall hazard where roof and floor construction work is performed. The railing is to be installed by an accredited installation company to conform to Industry Standard.	3 rails
		The fall protection measure should be installed on the roof where:	and the second se
		<ul> <li>the fall from the height of the edge of the roof is greater than 2 metres;</li> </ul>	
		<ul> <li>The roof is clad in concrete, semi-glazed tiles and the slope is more than 26 degrees; or is clad in metal deck or glazed terracotta tiles and the slope is more than 23 degrees; and</li> </ul>	(a) Fall height greater than 2m - roof pitch at or below 26°
		<ul> <li>Any other situation where the risk factor is increased eg. adverse weather conditions such as rain, hail, wind, ice which may affect the roof.</li> </ul>	THAT
		<ul> <li>Ground up guard rail maybe required where box guttering is installed and post &amp; coupling guard rail can not be installed</li> </ul>	
			Figure 20 Fixing roof battens to trusses
Use of bracket, hanging, or	Fall from heights	Bracket Scaffold	
two plank scaffold systems		For fall-heights >2 m, the installation of bracket scaffolding maybe used to g scaffolds can not. As with heavy duty scaffold it must be installed & handed complete. The scaffolder must supply a certificate of completion (ScaffTag)	over by the licensed scaffolder as
		No work is to be carried out (other than that of installing and dismantling of t scaffold unless the scaffold, or the relevant part or portion of the scaffold, is	
		To prevent collapse, do not load platforms & place materials on platform wh toe-board installed	ich can be dislodged as there is no

		Clear access must be maintained across the length of the bracket scaffold. The climbing on the handrails to gain extra height is not allowed. Un-authorised alterations to the guardrail, planks, brackets, or, any type of fixing device. Access to the scaffold is to be via the identified access point and hop up. Bracket scaffold in excess of 2m in height should be fitted with mid & top railing. In some cases where there exists the potential of an internal fall from the two plank system an extra plank or guard rail is to be fitted. Where guard rails are missing from the scaffold these are to be reported to the Site Supervisor and works not to commence until rectified.	
Use of trestles < 2m in height	Fall from height	<ul> <li>Working Platforms on Trestles (with a fall height of less than two metres).</li> <li>For work on single-storey dwellings, platforms (eg scaffold planks) on trestles provide a bigger, more stable surface to work from than a ladder. Ensure trestles are of a suitable standard, sufficiently strong to carry the expected loads of works, materials, and tools.</li> <li>Trestles and planks must be strong enough to carry the weight of bricks, mud boards and those persons working from them as outlined in AS 1576.</li> <li>Ensure that planks and platforms are in good, sound condition and that trestles are placed on a firm, even surface. All planks are to be checked for signs of wear or deterioration &amp; no planks are to be used on site which are unsafe</li> </ul>	

Fixing of Roof Battens to		Fixing Roof Battens to Trusses	
trusses		<ul> <li>Roof tile battens (which may be of timber or pressed galvanised metal) should be spaced at not more than 900mm centres to reduce the risk of internal falls. While fixing battens, the worker should position his or her body over a roof truss at all times and avoid over-reaching.</li> <li>The bottom (first) batten shall be installed as close as possible to the</li> </ul>	
		top edge of the fascia so as to act as a 'strengthener' to prevent the fascia from being dislodged should any person accidentally stand on it.	
Installation of fascia &		Installation of Fascia & Guttering	Figure 20 Fixing roof battens to trusses
Guttering >2m			
		<ul> <li>All fascia and gutter installation work on two-storey dwellings shall be carried out off the 'Quickstage' scaffolding or two plank bracket scaffold. Work shall not commence until the scaffolding has been fully erected, and a Certificate of Compliance has been handed over.</li> </ul>	
		<ul> <li>Where fascia &amp; gutter installation exceeds 2m (&gt;2m) the use of platfroms with a guard rail to p is required</li> </ul>	
		<ul> <li>Contractors/subcontractors who use the scaffold as part of their faults in the erection and/or maintenance of the scaffold to their of workers or the public is identified work shall cease until the ri</li> </ul>	Supervisor. If any risk to health and safety
		•	
Works on balcony – truss installation and works on	Fall from height	Doubles With Balcony Cover - Installation of Trusses & Plasterbo	
balcony		The construction of houses with balcony cover poses a fall risk when in plasterboard in this area. The following control measures are in place	
		<ul> <li>Temporary scaffold to be installed to assist the framer with the assist with placement have the carpenter mark outside edge of flooring for the balcony area can be installed at the time of the I protection installed.</li> </ul>	columns on the footing. Alternatively the
		• Off hire as soon as roof trusses completed & any other work in installed in the window opening	this area and once a guard has been
		<ul> <li>Install 1.5 mtr Balcony fall guard when all brick work is complete area occurring. Must specify attachment method. (book 48 hrs i</li> </ul>	

		• All work associated with the balcony roof should be completed prior to removal of the balcony fall guard e.g. cutting in, plasterboard, painting etc.
Works near cut-ins and sky lights	Fall through opening	<ul> <li>Cut In's and Sky Lights</li> <li>Where these are a part of the work plans the following measures are required: <ul> <li>Area to be barricaded off with safety mesh or physical guard rail until installation is completed</li> <li>Use of securely fixed boards may also be used.</li> </ul> </li> </ul>
Falling objects	Struck by falling object	<ul> <li>Kick boards are to be maintained whilst using scaffold</li> <li>Debris should not be thrown to the ground whilst others are in the vicinity of the works</li> <li>Other works should not work on site whilst roof tilers are present. Contact Site Supervisor prior to commencing works and tool box chat or SWMS prepared between all workers.</li> </ul>

	<ul> <li>Workers should not work on site whilst roof tilers are present working on the roof. Contact is to be made with the Site Supervisor.</li> <li>The following are guidelines for the safe disposal of debris from a roof with particular regard to roof tiles:</li> <li>Broken, damaged tiles or other debris are to be <i>carefully</i> thrown into two piles; one at the front and one at the back of the property. Both piles shall be located more than 2 metres from the gutter line to retain a 2 meter clear 'fall zone'. Tiles shall not be dropped or left on the ground within the fall zone, except where they fall under an existing scaffold. Other workers on site should be aware of this drop zone.</li> <li>At the end of each work day all pieces of tile and debris shall be cleared up and put into the two piles as above. Roof tilers shall be aware of the hazard broken tiles present to other workers on the site.</li> </ul>
	Workers, Supervisors, and others attending site should consult with workers who maybe working at site making them aware of their presence if there is a risk of falling objects. Consult with the contractor as to measures that can be put into place to prevent injury e.g. cease throwing of materials until workers, supervisor, or others have left site, wearing of hard hats as a personal protective mesure.
Works occurring in a roof space after plasterboard	Prior to Accessing the Roof Space –
installation	Before starting any work, turn off all electricity to the property at the main switchboard if the house is live and take steps to prevent the electricity from being turned back on while work is in progress (tag/lock-out).
	Accessing Roof Space
	<ul> <li>Be aware that heat and humidity may cause heat stress, so make sure fluid intake is sufficient to ensure you do not become dehydrated. Avoid accessing roof space in hot weather conditions (early morning starts better on high temperature days)</li> </ul>
	• Take additional lighting (e.g. torch) with you as the lighting is generally poor in ceiling spaces
	<ul> <li>Take care accessing and traversing the work area, avoiding tripping over debris, material and the ceiling trusses</li> </ul>
	<ul> <li>Step carefully on ceiling joists or other beams – not the ceiling material (i.e. Gyprock sheeting) – to avoid risk of falling or injury maintain three points of contact (foot on each truss and hand on girder)</li> </ul>
	<ul> <li>Be aware of the location of electrical cables, fittings and equipment and avoiding contact with them.</li> <li>Solar hot water piping can be very hot if not covered by the insulation.</li> </ul>
	Wear trousers and long sleaved loose fitting clothing to avoid contact with insulation materials

		If the roof space is dusty wear a P2 dust mask
Set up of fall arrest system	Personal Injury: - Falls - Musculo- skeletal injury - Suspension trauma	<ul> <li>Set-up of fall arrest system:</li> <li>Maximum distance free fall before arrest must not exceed 2m</li> <li>Ensure sufficient distance between work surface and any surface below to enable shock absorber to fully deploy</li> <li>Do not use shock absorber on single story</li> <li>Do not use lanyard in combination with inertia reel – leads to increased free fall distance</li> <li>Note: To calculate suitable distance, take into account:</li> <li>Distance between work surface and any surface below</li> <li>Original length of lanyard</li> <li>Maximum energy absorber extension</li> <li>Height of person</li> <li>Clearance allowance for dynamic stretch.</li> </ul>
		<ul> <li>Inertia reels:</li> <li>Can only be used where there are no obstructions (unless manufacturer can demonstrate contact will not impair function)</li> <li>Do not use on steep pitched roof (does not lock during fall down pitched roof)</li> <li>Do not lock in place – not designed for continual support</li> </ul> Operator. Ensure: <ul> <li>Physically fit and able to withstand possible fall</li> <li>Within weight limit (including clothing and equipment) of harness.</li> </ul>
Set up of travel retrain system	Personal Injury: - Falls	<ul> <li>Travel Restraint Systems - Use to physically prevent someone from reaching the unprotected edge</li> <li>set out the lanyard to a predetermined length to gain access to the work area however prevent fall from the unprotected edge ie. Lanyard is shorter than the distance to the unprotected edge or the attachment point to the user is at the shorter length.</li> </ul>

