	ANC Footon Dtv. Ltd		Doc No:	DEMO
Alle		ANC Foster Pty Ltd Safety Management System Initial Issue Date 27		27 Apr 2010
FOSTER	Safety Management System		Revision Date:	Initial Version
DEMOLITION	Revision No.	0		
DEMOLITION			Next Revision Date:	27 Apr 2011
Preparation: Safety Mgr	Authority: Director	Issuing Dept: Safety	Page:	Page 1 of 17

Purpose

The purpose of this program is to protect employees who may encounter demolition and the accompanying hazards while performing work.

Scope

This procedure applies to ANC Foster operations where employees may be exposed to demolition during the course of their routine work.

This program is to ensure essential information regarding the hazards of demolition work is communicated to our staff and controls to minimize any potential exposure. When work is performed on a non-owned or operated site, the operator's or their demolition services contractor's program shall be followed.

General

All demolition work must be carried out in accordance with AS 2601—1991. In the event of an inconsistency between a provision of AS 2601—1991 and the provisions of this Regulation, the provisions of this Regulation prevail.

Despite AS 2601—1991 or this Part, a building may be demolished by the use of explosives if a permit under Chapter 11 has been obtained.

The following matters, among others, are dealt with in AS 2601—1991:

- Sequential demolition
- Measures to prevent materials falling on workers and the public, including adequate fencing
- Use of heavy machinery and plant on suspended floors
- Ensuring that stairs and other means of access, and scaffolding, are clear of rubble and other debris
- Chimney demolition
- Dust control
- Warning signs and general safety measures
- Fire prevention
- Circumstances in which overhead protective structures and heavy duty independent scaffolding are required.

Refer also to WorkCover publications No 985 Demolition Hazard Profile and No 4102 Demolition Licensing - Guide to the OHS Regulation 2001.

Demolition

Confines

The requirements of AS 2601—1991 relating to fencing, overhead protective structures and scaffolding do not apply to the demolition of part of a building if:

- The work is carried out wholly within the confines of the building; and
- Demolished material is, at all times during the carrying out of the work, prevented from falling or rebounding outside those confines.

Printed on: 03 November 2010 11:19 AM

	ANC Footon Dtv. Ltd		Doc No:	DEMO
Alle		ANC Foster Pty Ltd Safety Management System Initial Issue Date		27 Apr 2010
FOSTER	Safety Management System		Revision Date:	Initial Version
DEMOLITION		Revision No.	0	
DEMOLITION			Next Revision Date:	27 Apr 2011
Preparation: Safety Mgr	Authority: Director	Issuing Dept: Safety	Page:	Page 2 of 17

Prior Notification

If ANC Foster is applying for demolition work proper notification is required and ANC Foster must ensure it has read and will comply with the WorkCover publication Demolition Licensing – Guide to the Occupational Health and Safety Regulation 2001 (Publication No 4102) and the relevant clauses of the NSW Occupational Health and Safety Regulation 2001 and the Australian Safety and Compensation Council's codes of practice before completing the form "Application Work Site Permit to undertake certain demolition work."

Stability Notification

A police officer must be informed immediately if, during any demolition work:

- The building concerned (including an intact part of the building) becomes unstable; and
- There is a danger that the building could collapse and injure any person who is in any place not under the control of the person who is carrying out that work, either directly or by his or her employees or agents.

Investigation Prior to Demolition

Before the commencement of stripping or demolition work, an initial investigation of the building to be demolished and the site on which it is located must be carried out in accordance with AS 2601—1991.

The records of the investigations must be included by the employer in the work method statement for the demolition to substantiate the choice of a particular sequence, method or technique of demolition.

It is a requirement that the results of the investigations of the building and site must be recorded in writing by ANC Foster and must be made available to WorkCover for inspection on demand.

Barricading and Signage

If falling material could endanger workers the danger area must be barricaded or effectively guarded to prevent entry by workers, and conspicuous warning signs must be displayed on all sides and approaches, or adequate protective canopies must be installed over the danger area, or adequate catch platforms or nets must be provided to stop materials from falling into areas accessible to workers.

Sequential Mechanical Demolition Requirements

If mechanical means are used to carry out demolition work, the work must be carried out sequentially.

ANC Foster must ensure that demolition work involving pulling with ropes or chains or similar means is carried out only if the building being demolished is not more than 4 metres in height and the work is carried out sequentially.

ANC Foster will follow the requirements of Chapter 11 of the OHS Regulation 2001 regarding the issue of permits for the carrying out of certain demolition work.

Demolition steps

ANC Foster shall ensure that:

- Dust from the demolition is controlled to the extent that is reasonably practicable;
- Materials and debris are not allowed to accumulate in any area to the extent that the materials and debris cause overloading of a structure that could result in the collapse of all or part of the structure;
- Any opening or hole in a floor, roof or other surface on which workers are required or permitted to walk or stand is guarded or covered;

Printed on: 03 November 2010 11:19 AM

A free-standing scaffold is used in the demolition of a building shaft from the inside;

	ANC Foster Pty Ltd Safety Management System		Doc No:	DEMO
A HING			Initial Issue Date	27 Apr 2010
► FOSTER			Revision Date:	Initial Version
DEMOLITION	Revision No.	0		
DEMOLITION			Next Revision Date:	27 Apr 2011
Preparation: Safety Mgr	Authority: Director	Issuing Dept: Safety	Page:	Page 3 of 17

- Steel structures are dismantled column length by column length and tier by tier from the top downward;
 and
- No wall or other part of the structure being demolished is left in an unstable condition or in danger of accidental collapse except during the actual demolition of that wall or part of the structure.
- Where a material chute presents a danger to workers, ANC Foster shall ensure that a guardrail is installed around the top of the chute to prevent workers from falling into the chute.

Structural Members and Cranes

ANC Foster shall ensure that structural members that are being removed are not under any stress other than the member's own weight and are secured or supported to prevent any unexpected movement.

Where a structural member is being hoisted by a crane or other similar lifting device from a structure being demolished or from the demolition rubble, ANC Foster shall ensure that the hoisting line is in a vertical position and is over the centre of gravity of the load in a manner that will reduce the danger to workers from a swinging or uncontrolled load.

Stabilizing

Where the demolition of a structure may affect the stability of an adjoining structure, ANC Foster shall ensure that the demolition is carried out in accordance with procedures certified in writing by a professional engineer to safeguard the stability of the adjoining structure and a copy of the procedures is kept at the worksite during demolition.

Housekeeping

Material and debris must not be allowed to accumulate on floors or on the ground outside the building or structure if workers will be endangered.

Clearances

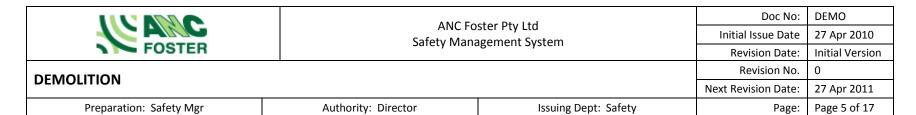
No person shall work in or below a building that is being demolished if, at any time during the carrying out of the demolition work, there is a danger that the person might be injured as a result of demolished or other material falling or rebounding. This clause applies whether or not the person's work is associated with the demolition of the building.

Printed on: 03 November 2010 11:19 AM

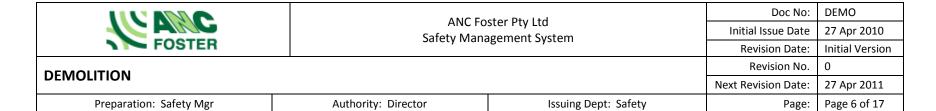
	ANC Foster Pty Ltd Safety Management System		Doc No:	DEMO
Allec			Initial Issue Date	27 Apr 2010
FOSTER			Revision Date:	Initial Version
DEMOLITION			Revision No.	0
DEMOLITION			Next Revision Date:	27 Apr 2011
Preparation: Safety Mgr	Authority: Director	Issuing Dept: Safety	Page:	Page 4 of 17

HAZARD PROFILE - DEMOLITION

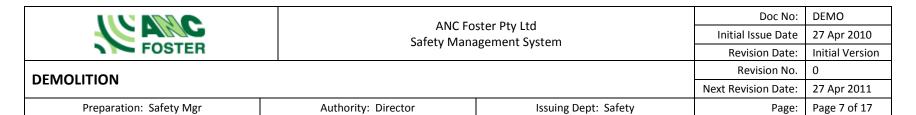
Job Activity (Tasks)	What Can Harm You (Hazards)	What Can Happen (Risks)	Causes Needing Management (Controlled)
	Inadequate training, consultation, planning and improvisation	Task specific injuries due to inexperience, inadequate consultation or failure to provide appropriate equipment	 Insufficient skills (competency) to complete the required task. Inadequate consultation with relevant employees. Inadequate competent supervision. Planning for required equipment not carried out. Improvisation using inappropriate equipment.
nning	Poor Access	Slips, trips and falls; abrasions, strains and sprains; manual handling injuries such as back damage	 Access to work area cluttered – poor housekeeping. Area around work area cluttered with stored materials and/or rubbish. Inadequate access for demolishers and their equipment.
General Planning	Insufficient lighting	Slips, trips and falls; walk into objects	 Poor lighting provided especially in basement areas. Access ways not suitably defined or lighted.
Ge	Lack of adequate ventilation	Illness; overcome by fumes	 Working in a Confined Space. Intake for asbestos decontamination, or other chamber positioned too close to diesel or other fumes. Petrol/diesel driven equipment used.
		- 11.5	Inadequate strength in perimeter handrail or midrail missing.
	Working at height near edge	Fall from the edge of a floor	 Gaps in perimeter protection, e.g. between screen or edge scaffold.
	Penetrations	Fall through penetration	Penetrations not fenced or covered, or cover not secured forming "trap".



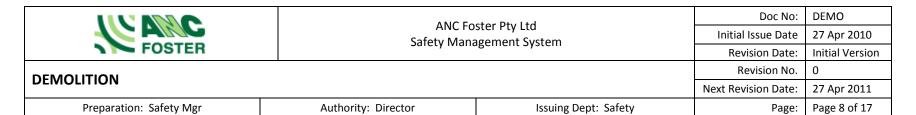
Job Activity (Tasks)	What Can Harm You (Hazards)	What Can Happen (Risks)	Causes Needing Management (Controlled)
	Uncontrolled collapse of structure or part of structure	Serious injury to person/s	 Poor planning of the demolition process. Planning, including method of demolition not approved by the appropriate Authority.
	Noise from plant and equipment	Hearing damage	 No engineering solution for high noise level, e.g. quieter or muffled equipment. No temporary sound absorption screen or barrier to protect other persons in the area, e.g. ply or polystyrene. No PPE or incorrect PPE for the required task.
	Sharp objects	Cuts, lacerations, puncture wounds	No PPE or incorrect PPE for the required task.
General Planning	Hazardous materials in structure	Exposure to hazardous materials	 Hazardous substances survey not conducted prior to commencement of work. Detailed removal techniques not documented. Specialised workers (licensed) not involved in removal or workers not inducted. Hazardous materials not reported when detected. Required precautions for removal, handling and disposal not followed. Demolition techniques inappropriate for containment of hazardous material – scatter material over a wide area. Other workers not prevented from entering areas where hazardous materials exist or are being removed. No warning signs or signs insufficient. Hazardous material left on site after completion of work.
	Dust and other fibres	Inhalation, respiratory disease	No PPE or incorrect PPE for the required task.



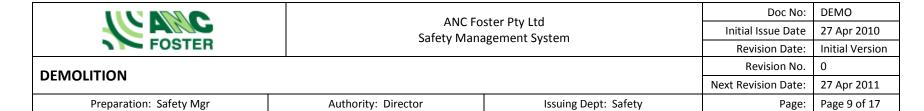
Job Activity (Tasks)	What Can Harm You (Hazards)	What Can Happen (Risks)	Causes Needing Management (Controlled)
	Exposure to Ultra Violet Light, glare	Skin cancer; sunburn, eye damage	 Personal protective clothing – sunscreen 15⁺, shirt, flap on hard hat not provided or not worn. AS rated sunglasses not worn.
onnect and/or on services	Electricity	Electric shock or electrocution	 Licensed electrical contractor not used to switch off/isolate power. On site labour do not treat all power circuits as live. Pyro connection (fire backup for alarm) not identified, tagged and isolated. Earth Leakage Switch not installed on mains supply or portable generator. "Volt Sticks" not used by workers to check for live circuits. Other power source from outside the site not identified and disconnected. Irregular ("bodgie") connections not identified and disconnected. Temporary connections not identified, tagged and isolated.
Preliminaries Disconnect and/or decommission services	Gas	Injury from explosion; severe burns from being caught in the explosion or fire or fighting a fire	 Licensed Gas Plumber not used to isolate and switch off gas supply at source. Residual vapour in mains not flushed with compressed air. Workers attempt to fight a gas fire instead of notifying emergency services. Leaks in pipes caused by heavy machinery loading.
	Other volatile or explosive materials	Injury from explosion; severe burns from being caught in the explosion or fire or fighting a fire	 Insufficient identification and planning. Dust ignition. Chemical ignition. Diesel/petroleum ignition. Decommissioning of old chemical, or fuel, tanks.



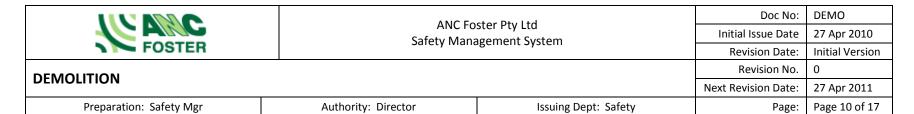
	Job Activity (Tasks)	What Can Harm You (Hazards)	What Can Happen (Risks)	Causes Needing Management (Controlled)
		Fire	Burns and/or smoke inhalation or asphyxiation	 Short circuit. Work area not cleared of combustible material prior to oxy cutting. Stray spark from oxy or other. Spotter" (additional worker) not used to watch for spot fires that may be caused by sparks from oxy cutting. Material combustion. Fire extinguisher not full or adjacent to work area. Workers not trained in the use of fire equipment.
	Protection of the public and site personnel	Windborne dust and small particles	Struck by dust or small particles. Eye damage	 Dust not wet down. No regular clean ups and removal. Safety glasses not worn. Poor separation and/or protection of work and public areas on the building perimeter or within the building if it is in use. Perimeter scaffold not adequately screened e.g. chain wire and
		Large falling debris or partial collapse	Serious injury to person/s	 Poor separation and/or protection of work and public areas on the building perimeter or within the building if it is in use. Uncontrolled collapse of large members or other material. Insufficient planning for lowering or control of large materials.
	Protection of th	Collapse of a facade to be retained	Serious injury to person/s	 Insufficient planning by engineer/s or other responsible persons. Planning does not allow for adverse weather – e.g. high winds. Façade foundation undermined. Façade supporting structure struck by plant. Poor separation and/or protection of work and public areas on the building perimeter or within the building if it is in use.



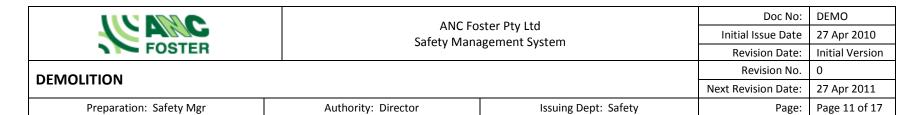
Job Activity (Tasks)	What Can Harm You (Hazards)	What Can Happen (Risks)	Causes Needing Management (Controlled)
	Lifting loads by crane	Serious injury to person/s from falling material being lifted	 Qualified (ticketed) Dogman or crane driver not used. Individual loads not inspected and cleared before lifting commences. Slings not regularly inspected and tested. Load not slung correctly. Sling capacity overloaded. Load strikes object, eg structure, when lifting or lowering. Communication error between Dogman and crane driver. Foundation for mobile crane unstable.
als removal	Contact with substance classified as hazardous	Short or long term health affect, e.g overcome by vapours, rash, allergy, disease	 Risk assessment not undertaken. Alternate (safer) substance not considered. No MSDS provided. No PPE or incorrect PPE for the required task. Safety instructions ignored and/or training in safe use of the substance not provided.
Hazardous materials removal	Release of Asbestos fibres	Exposure to Asbestos	 Unidentified sources within structure. Contamination of area with friable asbestos. Release of fibres during removal of: vinyl tiles. roof membranes. roof sheeting. electrical switchboards. lift brake linings. mastic sealants.



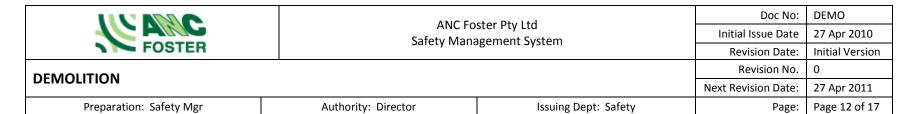
Job Activity (Tasks)	What Can Harm You (Hazards)	What Can Happen (Risks)	Causes Needing Management (Controlled)
	Lead dust or fumes	Exposure to Lead	 Unidentified lead paint on site. Inhalation of lead contaminated dust. Inhalation of lead contaminated fumes when cutting lead painted material
	Heat generated toxic fumes	Inhalation of fumes	 Inhalation of cyanide gas when cutting galvanized material. Inhalation of lead contaminated fumes when cutting lead painted material.
	Mercury in switch gear	Exposure to Mercury	Unidentified sources within structure.Damage to electrical switchgear during removal.
	PCBs in light fittings and transformers	Exposure to PCBs	 Unidentified sources within structure. Damage to fluorescent lights during removal. Damage to transformers during removal.
	Contamination of or lack of air	Person collapses, suffocates or is asphyxiated	 Intake for asbestos decontamination, or other chamber positioned too close to diesel, or other fumes. Asphyxiation in a confined space due to lack of ventilation. Confined Spaces Regulation not followed.
	Petrochemical products	Exposure causing allergies or other skin irritations	 Allergic reaction to chemicals. No PPE provided for the required task. Incorrect PPE for the required task.



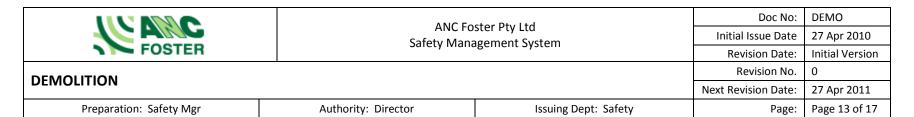
Job Activity (Tasks)	What Can Harm You (Hazards)	What Can Happen (Risks)	Causes Needing Management (Controlled)
Soft strip out	Synthetic mineral fibres (SMFs)	Release of fibres – inhalation	 Unidentified sources within structure. Work not conducted in a controlled manner when demolishing walls or ceilings. Scatter of glass fibres, mineral wool particles, SMFs. Fibres not securely bagged and removed before damage to bags occurs. No PPE or incorrect PPE for the required task.
ion techniques	Sharp objects	Puncture wounds, cuts, glass fragments in the eye/s	 No PPE or incorrect PPE for the required task. Debris not cleared from work area on a regular basis. Hypodermic needles left by drug users and vandals. Nails protruding from timber and other materials. Removal of debris containing glass or metal with sharp edges. Glass breaks during removal – fragments.
Structural demolition techniques	Heavy mobile plant in operation	Worker struck by plant	 Working too close to plant operating area. Workers not aware of planned exclusion zone for operation of plant. "Spotter" not used to supervise plant. Operator error in the control of the plant. Risk taking - violation of instruction or rule. Plant not switched off during on site maintenance. Additional passenger riding on the plant. Operator not signalled (eye contact) before approaching the



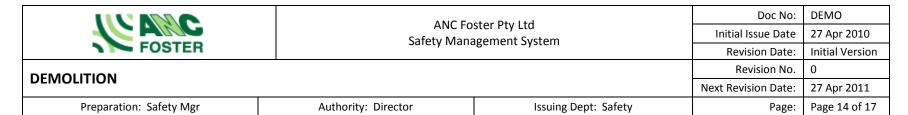
Job Activity (Tasks)	What Can Harm You (Hazards)	What Can Happen (Risks)	Causes Needing Management (Controlled)
	Plant working at height tipping debris over an open edge	Operating plant dragged over edge	 Work area cluttered with debris, particularly steel reinforcement and concrete. Debris caught on plant, e.g. in wheels or tracks. No safety rail for plant at point where debris is tipped over the edge. Safety rail of inadequate strength, and height, unable to withstand possible plant impact. Safety rail not replaced immediately if removed to increase access to the edge.
	Stability of operating plant	Roll over crushing operator	 Inadequate foundation for operating plant. Subsidence or collapse of earth or rubble below or adjacent to plant. Plant operating too close to an excavation, basement or trench. Plant inclined beyond safe operating limits.
	Stability of operating plant	Roll over crushing operator	 Inadequate foundation for operating plant. Subsidence or collapse of earth or rubble below or adjacent to plant. Plant operating too close to an excavation, basement or trench. Plant inclined beyond safe operating limits.
	Plant or equipment generated projectiles	Person/s struck by debris flung out from plant	 Poor housekeeping around plant and equipment. Debris spun off machinery wheels or tracks. Shattered concrete or masonry breakage when using powered hammers or picks. Unauthorised persons wander into work area. Operator not adequately protected.



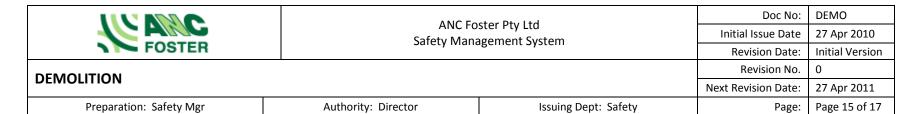
Job Activity (Tasks)	What Can Harm You (Hazards)	What Can Happen (Risks)	Causes Needing Management (Controlled)
	Wall/s destabilized	Collapse of wall or part of the wall onto person/s	 Site inspection and detailed Work Method Statement not carried out. Engineering approval for demolition sequence not obtained. Planned demolition sequence not followed. Public areas, e.g. street or walkway, not closed if there is a risk of collapse. Demolition not started at the top of the wall. Operator untrained, lack of understanding of specific demolition sequence. Stray debris falls, e.g. loose bricks. Undetected changes in wall structure, e.g. ducts.
	Column/s overloaded or destabilized	Uncontrolled collapse causing death or multiple injuries	 Site inspection and detailed Work Method Statement not carried out. Engineering report not correct. Planned demolition sequence not followed. Not built to plan or plans incorrect. Moving plant collides with, or swinging boom, hits column. Deterioration due to termites or rust. Public areas e.g. street or walkway, not closed if there is a risk of



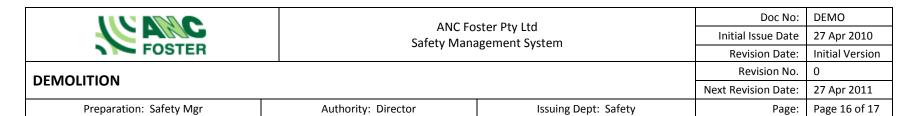
Job Activity (Tasks)	What Can Harm You (Hazards)	What Can Happen (Risks)	Causes Needing Management (Controlled)
	Floor/s overloaded or destabilized	Floor collapse causing death or multiple injuries	 Site inspection and detailed Work Method Statement not carried out. Engineering report not correct. Plant falls through floor. Not built to plan or plans incorrect. Changes in floor structure or part thereof during life of building e.g. old liftwell, tower crane or dumbwaiter. Demolition materials stacked too high causing overload. Structural engineer's report does not establish depth guidelines for the stacking of rubble. Plant strays from defined operating areas. Planned demolition sequence not followed. Work area slab not regularly inspected for signs of movement or new cracking, especially from underneath.
	Use of explosives to weaken or topple main structure	Person/s struck by debris flung out by blast	 Insufficient technical skills (competency) to complete the required task. Planning, including method of demolition not approved by the appropriate Authority. Inadequate assessment of the structure and explosive technique to be used. Inadequate early warning. Inadequate blast absorption barriers. Inadequate exclusion zone for workers and the public.



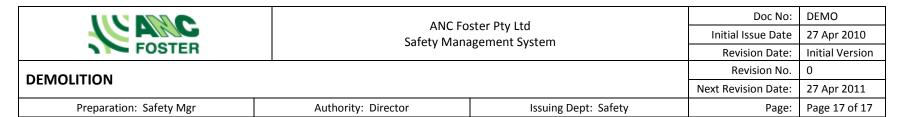
Job Activity (Tasks)	What Can Harm You (Hazards)	What Can Happen (Risks)	Causes Needing Management (Controlled)
Use of hand held tools	Falling debris or tools	Person struck by falling objects	 No barrier exclusion zone or size of the zone inadequate. Drop zones not barricaded and/or sign posted. Debris tipped from higher levels fall onto plant or persons below. Insufficient containment. Unauthorized persons wander into work area. Tool dropped by worker. Perimeter of the site not adequately secured with a combination of scaffold, chain wire mesh, shade cloth, plywood, carpet and 10KPa hoardings.
	Operating steel tipped tools e.g. jackhammer	Steel splinters flung out from shattered tool striking worker/s or pick punctures work boot	 No PPE or incorrect PPE for the required task. Jackhammer pick breaks or shatters. Pick worn or damaged. Jammed jackhammer resulting in loss of control. Loss of control due to constrained work area. Operator not trained in the use of the tool. Operator uses foot to guide jackhammer pick.
	Operating chain saw	Saw kicks back causing blade to strike operators body	 Equipment not adequately maintained. Operator not trained in the use of the tool. No PPE or incorrect PPE for the required task. Loss of control due to constrained work area. Kickback brake not working.
	Operating electric power saw or angle grinder	Electric Shock or electrocution	 Electrical equipment faulty. Extension lead faulty or damaged. Lead severed by power saw blade or disk. Earth Leakage Switch not installed on mains supply or portable generator.



Job Activity (Tasks)	What Can Harm You (Hazards)	What Can Happen (Risks)	Causes Needing Management (Controlled)
	Cutting with power saw or angle grinder	Serious cuts from contact with saw blade or disk	 Saw blade or grinder disk unguarded. Guard faulty. Saw blade or cutting disk damaged causing tool to catch and jump. Cutting disk badly worn – blade disintegrates. Wrong type of blade or cutting disk used. Grinder not fitted with "Dead Mans" switch.
	Sparks generated when using power saw or angle grinder to cut metal	Fire causing burns	 Work area not cleared of combustible material prior to cutting. "Spotter" (additional worker) not used to watch for spot fires that may be caused by sparks. Fire extinguisher not full or adjacent to work area. Workers not trained in the use of fire equipment. No PPE or incorrect PPE for the required task.
	Cutting Steel with Oxy Acetylene torch	Burns to the body e.g. arms and legs. Damage to eyes	 No PPE or incorrect PPE for the required task. Hot cut piece not constrained. Long guns (extended nozzles) not used for constrained work areas. Damage to hoses or equipment. No flashback arrester. Blow back from rust and concrete.



Job Activity (Tasks)	What Can Harm You (Hazards)	What Can Happen (Risks)	Causes Needing Management (Controlled)
height	Working at height	Fall e.g. from the edge or through a roof or from a boom lift	 No edge protection. No harness or harness not secured. Harness anchorage incorrect. Climb out of elevated boom lift. Fall through brittle roof. Standing on a destabilized roof after fixings have been removed in advance. Workers not trained in the use of safety equipment for working at heights Work not supervised to ensure correct procedures are followed.
Working at height	Erecting ladders or working platforms near live power	Electric shock or electrocution	 Working too close to live power lines. Ladder contacts power lines. Tiger Tails not in place on power lines. Wind causes power lines to swing. Wind causes loss of control when erecting ladder.
	Working from a ladder	Fall from ladder	 Ladder not tied off. Load capacity of ladder exceeded. Ladder failure due to physical damage or corrosion. Domestic ladder used instead of commercial. Ladder not positioned at correct angle.



Job Activity	What Can Harm You	What Can Happen	Causes Needing Management (Controlled)
(Tasks)	(Hazards)	(Risks)	
	Working from a platform	Fall from platform	 Incorrect assembly or different systems mixed together. Access ladders not positioned a minimum of 1 metre above the platform. Scaffold incorrectly constructed. Scaffold not adequately tied or braced. Platform not fully decked. Inadequate edge protection. Struck by plant or equipment. Struck by uncontrolled collapse of part of the structure or dislodged