

SAFE WORKING GUIDELINES DEMOLITION

1. Introduction

The objective of this procedure is to prevent the occurrence of injury and reduce the severity of injuries / illness resulting from violence, bullying and harassment from others whilst working on a Proline Building Commercial Pty Ltd worksite/s.

2. Purpose

The purpose of this document is to provide suitable information for the identification, assessment and control of hazards associated with demolition structures on site.

3. Definitions

Demolition work means construction work involving the demolition of a building, but does not include construction work involving the removal of power or telecommunication poles.



4. Roles & Responsibilities

Senior Management is responsible for the following:

- Ensure an investigation of the building to be demolished as been carried out in accordance with AS2601-1991 and recorded as required;
- Ensure records of the investigation are recorded within the Safe Work Method Statement;
- Ensure identification, assessment, control and evaluation of work activities which may result in demolition activities to person/s on site.

Project Managers/ Supervisors and Site Supervisor

- Ensure records of the investigation are recorded within the Safe Work Method Statement and reviewed on site prior to commencing works;

Employees / subcontractors are responsible for the following:

- Co-operate with Project Managers/Supervisors and Site Supervisor in implementing the demolition risk management controls.

5. Procedure

Employees and subcontractors are responsible for developing an understanding of becoming competent in the implementation of risk management principles and practices on site/s.

This is a four phase process:-

1. Risk Identification

- 2. Risk Assessment
- 3. Risk Control
- 4. Risk Evaluation

5.1 Risk Identification

Identification of risks associated with demolition of structures should be undertaken by the following means:

- Investigation
- Consultation with employees / subcontractors
- Observation of work practices
- Inspections of the task and associated work areas
- Examine workplace injury records to assess what activities have occurred to what tasks being carried out, which may cause injury, illness or incident in young and inexperienced personnel.
- Notifiable Demolition Work

3.1 Notifiable demolition work

Regulation 142

A person conducting a business or undertaking who proposes to carry out the following demolition work must give written notice to the regulator at least 5 days before any of the following work commences:

- demolition of a structure, or a part of a structure that is load bearing or otherwise related to the physical integrity of the structure, that is at least 6 metres in height
- demolition work involving load shifting machinery on a suspended floor
- demolition work involving explosives.

5.2 Risk Assessment

Identified hazards should then be prioritized according to the severity of injury, frequency of task and probability whilst performing the task. When assessing the risk, consideration will be given to:

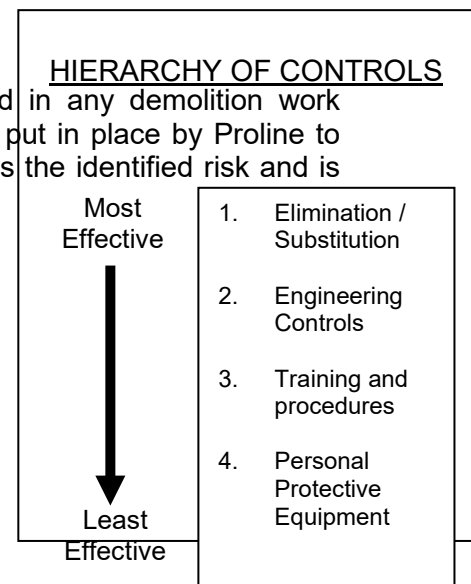
- Occupation or job/task of the person exposed
- Work environment
- Duration and frequency
- The skills, training and experience of the young person

5.3 Risk Control

It is the responsibility of all employees and subcontractors involved in any demolition work activity to ensure they co-operate with the control measures that are put in place by Proline to reduce the risk. Risk Control is the means for minimizing or eliminates the identified risk and is carried out using the following hierarchy of control:

- *Eliminate the risk by ceasing the hazardous component or activity*
- *Substitute a less harmful alternative hazard substance or process*
- *Isolate the hazard at source using engineering means*
- *Introduce administrative controls to minimize exposure*
- *Use of Personal Protective Equipment*

When considering control options the following hazards should be considered:



- General Planning
 - Inadequate training, consultation, planning and improvisation
 - Poor access
 - Insufficient lighting
 - Lack of ventilation
 - Working at height or near edge
 - Penetrations
 - Uncontrolled collapse of structure or part of structure
 - Noise from plant and equipment
 - Sharp objects
 - Dust
- Height of the structure
- Position of the structure (ie adjacent to buildings/public spaces)
 - Protection of public
 - Protection of site personnel
- Overhead Protective Structures
- Scaffolding Requirements
- Material being demolished
 - Soft strip out
 - Synthetic mineral fibres
 - Concrete / Masonry type construction
- Hazardous Materials
 - Release of Asbestos fibres
 - Lead dust or fumes
 - Dust

Lead

Lead is found in paint, old water pipes and other plumbing fittings, sheet lead, solders, lead flashing, lead light windows and glass. The age of a structure may be directly related to the amount of lead that can be present (see Table 2).

Table 2 – Lead sources

Approximate date of construction	Sources of lead hazards
1920 – 1978	Paint
1920 – 1978	Plumbing
1923 – 1986	Automobile exhaust (may accumulate as ceiling dust)

If it is suspected that the structure contains lead based paint, a test for the presence of lead should be conducted.

The precautions which should be taken when demolishing materials containing lead include:

- minimising the generation of lead dust and fumes
- cleaning work areas properly during and after work
- wearing the appropriate PPE, and
- maintaining good personal hygiene.

Further information can be found in AS 4361.1: *Guide to lead paint management-Industrial applications*. Testing can recognise dried paint film with more than 1 per cent (by weight) to be lead-containing paint.

- Heat generated toxic fumes
- Mercury in switch gear
- PCB's in light fittings and transformers
- Contamination of or lack of air
- Petrochemical products

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- Existing Services
 - Electricity
 - Gas
 - Other volatile or explosive material
 - Fire
- Stability of Operating Plant
- Plant and Equipment Generated Projectiles
- De-stabilized walls
- Floors overloaded or destabilized
- Falling Objects
- Use of explosives
- Use of hand tools
 - Operating power tools
 - Sparks generated when using power saw or angle grinder to cut metal
 - Cutting steel with oxy acetylene torch
- Working from ladders or platforms
- Fatigue of workers

5.4 Risk Evaluation

It is important to evaluate the effectiveness of the control measures implemented, to ensure that they are effective and that they do not lead into the introduction of additional hazards within the work environment. An evaluation of control measures must be carried out by the Site Supervisor during the tasks Safe Work Method Statement Reviews.

6. Safe Work Method Statements

If the demolition work is or involves high risk construction work, a person conducting a business or undertaking must prepare a SWMS before the work starts. The SWMS must:

- identify the type of high risk construction work being done
- specify the health and safety hazards and risks arising from that work
- describe how the risks will be controlled
- describe how the control measures will be implemented, monitored and reviewed, and
- be developed in consultation with workers and their representatives who are carrying out the high risk construction work.

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One SWMS can be prepared to cover all high risk construction work being carried out at the workplace by contractors and/or subcontractors. For example, demolition work might involve a number of types of high risk construction work, including work that:

- involves a risk of a person falling more than 2 metres
- involves, or is likely to involve, the disturbance of asbestos
- involves structural alterations or repairs that require temporary support to prevent collapse
- is carried out on or near a confined space
- involves the use of explosives
- is carried out on or near pressurised gas distribution mains or piping
- is carried out on or near chemical, fuel or refrigerant lines
- is carried out on or near energised electrical installations or services, and
- is carried out at a workplace in which there is any movement of powered mobile plant.

In this case, the contractors or subcontractors can consult and cooperate to prepare one SWMS. Alternatively they can prepare separate SWMS. If they choose to do this they must consult with each other to ensure all SWMS are consistent and they are not creating unintended additional risks at the workplace.

7. Securing the Work Zone

Exclusion zones

To protect workers undertaking demolition activities, exclusion zones should be considered to prevent unauthorised personnel entering work areas.

A system to prevent falling objects impacting on workers should be implemented to protect the safety of people who are working on or in the vicinity of the demolition work. In particular, any area where a falling object might reasonably be expected to land should be designated an exclusion zone. The enclosed and/or protected area should extend horizontally to a safe distance beyond the overhead work area.

Planning for exclusion zones should take into consideration:

- erecting secure impassable barricades with adequate signage and appropriate lock out procedures to prevent unauthorised pedestrian or vehicular access to the area
- providing information to workers and other persons at the workplace advising them of the status of the exclusion zones, and
- providing supervision so that no unauthorised person enters an exclusion zone.

Exclusion zones and safe distances may be required during:

- the stripping, removal and/or dropping of debris
- the operation of demolition plant or equipment
- pre-weakening activities for a deliberate collapse, and
- the deliberate collapse or pulling over of buildings or structures.

Public access and protection

Adequate public safety should be maintained in public places and areas adjoining the workplace as the work progresses (e.g. roads, walkways). Where demolition work is adjacent to a public place and there is a risk of falling debris or hazardous noise, a method of protection should be selected and:

- erected before the commencement of demolition work
- kept in position at all times during the progress of the work, and
- regularly inspected and maintained.

Control measures to isolate the work from the public may include installing hoarding such as security fencing, containment sheets and mesh, an overhead protective structure, road closures and specified exclusion zones.

Overhead protective structures should be provided for public walkways in conjunction with perimeter fencing. Overhead protection may be constructed from scaffolding, fabricated steel or timber and should be designed to withstand an appropriate load.

Unauthorised entry to a demolition workplace can expose persons to a number of hazards that, if not controlled, could result in fatalities or serious injuries. The person conducting a business or undertaking who controls the workplace, who may be a principal contractor or demolition contractor, must ensure, so far as is reasonably practicable, that the workplace is secured so as to prevent unauthorised access. Monitoring of access and egress points for the workplace should be conducted during the work.

Further information on security fencing, falling materials, overhead protection and hoardings can be found in AS 2601: *The demolition of structures*.

7.1 Refer to the Workcover Demolition Code of Practice July 2015 for further information on sequencing / hazard controls.

8. Training

The Systems Manager will train employees during WHS EMS QA Seminars to ensure that employees can identify risky activities and receive appropriate training.

9. Review & Evaluation

In order to ensure this procedure remains effective, it will be reviewed by Senior Management on an annual basis or in the event of an injury or near miss resulting from any activity, changes in legislation or if raised by an employees concern.

10. References

- Work Health & Safety Act 2011
- Work Health & Safety Regulation 2017
- AS 2601 -1991 The Demolition of Structures
- Demolition Hazard Profile 2001
- Preventing Structural Collapse – Workcover Safety Alert June 2011
- Cutting and Drilling Concrete and other Masonry Products COP 1997
- Noise Management and Protection Hearing at Work 2004
- Demolition Workcover Code of Practice July 2015

11. Version Control

Date	Version	Owner	Comments
14.05.09	1	Michelle Noy	For Issue
11.11.11	2	Michelle Murphy	Following External 3 rd Party Audit
18.04.12	3	Michelle Murphy	Changes in legislation
19.02.16	4	Michelle Murphy	General Review
01.09.17	5	Michelle Murphy	General Review
1.6.18	6	Michelle Murphy	Changes in legislation
01.12.23	7	Michelle Murphy	General Review