

TIP sheet

Demolition

T016 – SEPTEMBER 2007



Minimum requirements

A principal contractor shall be appointed for all demolition work. The principal contractor shall:

- Either be the RTA or a WorkCover NSW demolition licensed organisation pre-qualified by the Department of Commerce.
- Comply with all principal contractor requirements under the OHS Regulation 2001 Chapter 8.

And adhere to the following requirements:

- Identify, register, assess and then eliminate or minimise all risks associated with the demolition work (including identified asbestos).
- Undertake all demolition work in accordance with the requirements of AS 2601.
- The demolition site shall be secured with an adequate security fence / hoarding to prevent unauthorised access to the site.
- The security fence shall be clearly signposted as per AS 1319 at appropriate place to warn the public that demolition work is in progress.
- Ensure that an investigation of the structure and site is undertaken.
- All demolition work is to be completed sequentially, as determined through the investigation.

- Based on the investigation findings a SWMS and Work Plan are to be developed for the demolition work.
- At all times demolition work is supervised by a competent person
- Relevant WorkCover licences, permits and notification are held or completed.

Licensing requirements

Licensed work, as defined within the OHS Regulation 2001 – Chapter 10, shall only be undertaken by a licensed operator and includes:

Class I unrestricted licence

Demolition work that involves:

- The total demolition of a structure that is 10 metres or more in height.
- The partial demolition of a structure that 10 metres or more in height so as to affect its structural integrity.
- The use of load shifting machinery in suspended floors.
- The total or partial demolition of pre-tensioned or post-tensions structural components of a building or structure.
- Mechanical demolition to a structure that is 4 metres or more in height.
- Explosives or methods of induced collapsed.

Class 2 Restricted licence

Restricted demolition work, includes work other than work comprising of demolition:

- Above 15 metres in height.
- Using a tower crane on site.
- Using a mobile crane with a rated capacity above 100 tonnes.
- Of pre-tensioned or post-tensioned structures.
- Involving floor propping.
- Using explosives.

Licensed operators shall clearly display a copy of the licence while licensed work is being undertaken.

Permit requirements

Demolition work requiring a permit, as defined within OHS Regulation – Chapter 11, shall only be undertaken in accordance with a permit. Permits must be lodged to WorkCover at least 7 days (or 21 days if explosives are used for demolition) before the work commences. Refer to OHS Regulation 2001 Ch 11.

Permit work includes:

- Demolition work that involves pushing or pulling using a mobile crane.
- Demolition work that involves a crane using a demolition ball.

- Demolition of a building that is more than 4 metres in height that involves pulling with ropes or chains &
- Demolition of a building by means of explosives.

Operators undertaking demolition work requiring a permit shall clearly display a copy of the permit while the work is being undertaken.

WorkCover must be notified of proposed demolition work other than demolition work for which a permit is required. Refer OHS Regulations 2001 Part 12. 3.

General precautions

- The structure to be demolished and its components are to remain in a stable and safe condition at all stages.
- Opening where there is a risk of person falling shall be guarded or boarded over and the boarding secured against accidental removal.

- Precautions must be taken to ensure the stability of all parts of the structure and the safety of persons on and outside the site in the event of a severe weather change.
- The site shall be secured at all times. However, ready access must be available to emergency services in the event of an emergency.
- Services must be protected and made safe or if not required disconnected and sealed.

Risk assessment

A risk assessment must be completed by a technically competent person who has experience in demolition work. The following risk control measures shall be considered for public safety:

- Street closures and vehicle / pedestrian detours.
- Hoardings and security fences.
- Scaffolding.
- Overhead protective structures.
- Adequate lighting.
- Warning signage.

The following risk control measures shall be considered for site safety:

- Safe means of access / egress.
- Personnel are not to work underneath or within the structure being demolished.
- Adequate PPE.
- Electrical safety rules.
- Overhead protective structures and scaffolding.
- Confined space and hot work permits to work.
- The following risk control measures shall be considered for adjoining buildings / structures:

- Vibration minimisation,
- Shoring underpinning adjoining structures,
- Weatherproofing &,
- Protective screens / structures.

The following risk control measures shall be considered for the surrounding environment:

- Dust control measures including vacuuming and hosing down.
- Fire hazard reduction.
- Noise minimisation techniques as per AS 2436.
- Local flora and fauna protection.

Demolition hazard profile

Refer to WorkCover's publication on demolition which provides an extensive hazard profile for this activity.

Competency based training

Personnel working at the demolition site must be trained in safe ways to undertake the work. The training shall incorporate:

- The induction of all personnel on site in accordance with the OHS management plan.
- The nature of hazards involved, the means adopted to control the risks & the emergency procedures in place.
- The requirements of AS 2601 including demolition techniques.
- All plant required to be used during the demolition work.
- PPE use, care, maintenance and storage &,
- SWMS and Work Plan associated with the demolition work.

Investigation

A competent person and if required, a structural engineer must conduct and document a thorough investigation of the structure to be demolished and the site on which it is located on, prior to the commencement of any demolition work.

Work plans

Using the information gained through the investigation, a work plan that details the methods and procedures for the safe demolition of the structure must be specifically prepared by a competent person and kept on site. A competent person must undertake work in accordance with the work plan and make any necessary modifications.

Emergency preparedness

Emergency provisions are to be determined to minimise the effect of incidents such as uncontrolled collapse and fire.

Personal Protective Equipment

At minimum, every worker on site shall wear a safety helmet complying with AS 1801.

Scaffolding

If scaffolding is used during demolition work it shall be heavy duty scaffolding and erected in accordance with AS 1576 to withstand the impact of rubble.

Overhead Protective Structures

Overhead protective structures are required to be used where a demolition site adjoins a public thoroughfare with a footpath alongside the common boundary.

Daily checks

The following check points should be inspected daily prior to work commencing:

- All openings and elevated free edges are properly guarded.
- Any temporary bracing, shoring, or propping is tight, stable and secure.
- All fire and safety services are operational and all other services disconnected.
- All hazardous substances have been removed.
- Lines of communication to the supervisor are clear and operational.
- All emergency escape routes are clear and clearly marked.

The following check points should be inspected at the end of each day prior to leaving the site:

- All partially demolished elements are stabilised.
- All demolished materials have been removed or secured.
- All fire or embers have been extinguished
- All emergency escape routes are clear.
- All boundaries are secured.

References

[OHS Act 2000](#) & [OHS Regulation 2001](#) Ch 2, 3, 4, 8, 9, 10 & 11

[RTA OHS policy 2.0](#) - Risk management

AS/NZS 1576.1:1995 Scaffolding – General requirements

AS 2436 - Guide to noise control on construction, maintenance and demolition sites

AS 2601 - The demolition of structures

AS 3012 - Electrical Installations – Construction and Demolition Sites