

**TOOLBOX TALK
NO.42**

Demolition



Demolition can be a hazardous activity. It is of a technical nature and therefore must be carried out by competent persons only. The word demolition is often misconstrued to mean large-scale, or to involve the complete removal of a structure or building. However, the removal of a single element or the part removal of a structure or building also constitutes demolition.

You must be aware of the hazards and risks. These need to be identified, assessed and effectively controlled to avoid danger and reduce the potential for injury to persons and damage to property, as far as reasonably practicable.

Personal Protection

To protect yourself you need:

- A hard hat at all times
- Strong boots with ankle support.
- Gloves to prevent cuts.
- Goggles to save your eyes.
- Respirators are also required in dusty conditions.

Key issues are:

- Falls from height
- Injury from falling materials
- Uncontrolled collapse
- Risks from connected services
- Traffic management
- Hazardous materials
- Noise and vibration
- Fire
- Worker involvement



**Danger
Demolition in
progress**

Falls from height

During demolition and dismantling, workers can be injured falling from edges, through openings, fragile surfaces and partially demolished floors.

Injury from falling materials

Workers and passers-by can be injured by the premature and uncontrolled collapse of structures, and by flying debris. A safe system of work is one that keeps people as far as possible from the risks.

This may include:

- establishing exclusion zones and hard-hat areas, clearly marked and with barriers or hoardings if necessary
- covered walkways
- using high-reach machines
- reinforcing machine cabs so that drivers are not injured
- training and supervising site workers

The method statement for the demolition should identify the sequence required to prevent accidental collapse of the structure.

Risks from connected services

Gas, electricity, water and telecommunications services need to be isolated or disconnected before demolition work begins. If this is not possible, pipes and cables must be labelled clearly, to make sure they are not disturbed.

Traffic management

Effective traffic management systems are essential on site, to avoid putting workers at risk of being hit by vehicles turning, slewing, or reversing. Where possible, vision aids and zero tail swing machines should be used.

Hazardous materials

Hazardous materials that need to be considered include dust, asbestos and respirable crystalline silica (RCS). There may also be material or contamination on site that has not been cleared, for example: acids from industrial processes, paints, flammable liquids

Noise and vibration

Frequent exposure to loud noise can permanently damage a person's hearing. Noise can also create a safety risk if it makes it difficult for workers to communicate effectively or stops them hearing warning signals.

Vibrating hand tools used in demolition can cause hand-arm vibration syndrome (HAVS). Workers exposure to vibration needs to be managed and reduced as far as possible.

Fire

Fire is a risk where hot work (using any tools that generate spark, flame or heat) is being done. During structural alteration, the fire plan must be kept up to date as the escape routes and fire points may alter. There must be an effective way to raise the alarm.

Asbestos

It can be present today in any building built or refurbished before the year 2000. When materials that contain asbestos are disturbed or damaged, fibres are released into the air. When these fibres are inhaled they can cause serious diseases. These diseases will not affect you immediately; they often take a long time to develop, but once diagnosed, it is often too late to do anything. This is why it is important that you protect yourself now.