

# Workers engulfed in trench collapse

Published 26 Feb 2019

## **WorkSafe is warning employers and workers in the construction and utilities industries to take trench safety seriously, after two plumbers were engulfed in a trench collapse.**

### **Background**

Two plumbers were recently engulfed and injured while working in a trench that collapsed. They were outside the area protected by trench shields.

This incident follows three fatalities involving trenches that occurred in 2018. All of these incidents are a reminder of why it is important to ensure all necessary safety measures are in place to control the risks of working in and around trenches.

### **Safety issues**

Trench shields are not intended to provide ground support, they provide engulfment protection to workers within the shield. Workers need to stay within the confines of the shield at all times when working in a trench.

Soil conditions can create a higher risk of ground slippage and engulfment. Soil conditions always need to be taken into account when undertaking trenching work.

All trenches can pose a significant risk to the health and safety of workers, especially those who are bending down to work on pipes or other services. Risks of engulfment and serious or fatal injuries increase with trench depth.

### **Recommended ways to control risks**

#### **Before trenching work starts**

Employers and self-employed persons (including principal contractors who are employers) must ensure:

- a safe work method statement (SWMS) is developed, and followed, for high risk construction work, such as when the trench depth is more than 1.5 metres or powered mobile plant is involved
- an emergency response plan (ERP) is developed to deal with potential incidents (eg worker rescue, ground slip or flood).

They should also:

- plan work so it can be done safely, including determining appropriate engulfment protection and site security requirements
- provide a safe method to enter and exit the trench, such as having trench shields with guard rails attached and safe access provided by a tied off ladder.

### **Engulfment protection systems**

Engulfment protection systems should be in place for trenching where the excavation is of sufficient dimension or depth to allow the entry of a person. These include:

- battering the walls to a safe angle
- benching the walls to form one or a series of steps
- shoring up the walls to support the sides

- working inside trench shields.

### **When undertaking trenching work**

Employers and self-employed persons (including principal contractors who are employers) should ensure:

- a competent person, experienced in trenching works, supervises and monitors the work
- workers never work outside the engulfment control measures
- workers are not in areas where the control measures have been removed, if protection is being progressively installed
- workers are instructed on the ERP and SWMS and follow it
- materials, spoil and plant are kept away from the edge of the trench
- workers not involved with the work and the public can't access the trench and works area
- the risks of a fall into the trench is controlled, for example by:
  - using trench box extensions or trench sheets with a height greater than the trench depth
  - installing guard rails or covers on trench shields
  - inserting guard rails and toe boards into the ground immediately next to the supported excavation side
  - installing landing platforms or access structures such as scaffold towers inside deep excavations
  - installing effective barriers or barricades
  - providing clearly defined pedestrian detours
  - fencing around excavations or trench shields.

- where there is a risk of members of the public accessing the works area, secure and stable site fencing is provided to prevent access
- while the trench remains open, the trench and site security is inspected regularly and as soon as possible after any event that could affect the safety of the trench (eg a weather event or ground slip).

### **Legal duties**

An employer must, so far as is reasonably practicable, provide and maintain for employees of the employer a working environment that is safe and without risks to health, including risks associated with engulfment during construction work.

Where there is a risk of a person becoming engulfed by soil or other material when construction work is performed, an employer or self-employed person must establish emergency procedures before the work commences. The emergency procedures must:

- so far as is reasonably practicable, help the engulfed person be rescued and provided with first aid
- be enacted immediately after a person becomes, or is likely to become, engulfed.

If the excavated depth of a trench or shaft is more than 1.5 metres, the work is high risk construction work. An employer or self-employed person must not perform high risk construction work if there is a risk to the health or safety of any person arising from the work unless:

- a SWMS is prepared for the work before it commences, and
- the work is performed in accordance with the SWMS.