Construction

Trenching and shoring – excavations >

This information bulletin is designed to assist persons undertaking excavation work. It outlines some of the major considerations in identifying hazards and assessing risks associated with the work.

Excavation work requiring shoring under the Workplace Health and Safety Regulation 145 requires notification to NT WorkSafe (form FM019) prior to commencement of work.

Regulation 145 states that shoring shall be provided at a workplace where any excavation or earthwork is being performed and there is a risk to the health and safety of a person from the fall or dislodgement of earth, rock or other material that forms the side of the excavation or earthwork or is adjacent to the excavation or earthwork; or if a worker is required to work in an excavation or opening in the ground that is 1.5 metres or more in depth.

Excavation

Excavation work has to be properly planned, managed, supervised and carried out to prevent accidents. Before commencing the work and during work you should consider the following:

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	YES	NO
Have you determined the exact location of underground services such as electricity, gas, water and sewerage or the presence of naturally occurring hazards?	☐	☐
Have you ensured the stability of buildings, structures and roads adjacent to the excavation?	☐	☐
Have you organised to isolate the excavation from access by the public by using barricades, covers or fencing?	☐	☐
Will there be adequate support for the excavation, or will it be sloped or battered back to a safe angle?	☐	☐
Is a safe method used for putting in the support, without people working in an unsupported excavation?	☐	☐
Soil shall be removed to a safe distance from the trench edge to prevent collapse into the trench (the distance required will depend on the nature of the soil)?	☐	☐
Materials and plant shall be stored away from the edge of the excavation to reduce the chance of collapse?	☐	☐
Are there established traffic controls where required using adequate signage, personnel and lighting?	☐	☐
Have you ensured safe access and egress in excavations where people are required to enter (sufficiently long secured ladders installed at each end and placed at appropriate distances along the excavation)?	☐	☐

Do you ensure that hard hats are worn by all entering the excavation? ☐ ☐

Are high visibility vests or clothing provided and worn by all exposed to vehicular traffic? ☐ ☐

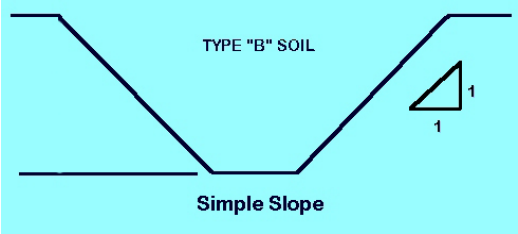
Is the excavation regularly inspected by a competent person (at the start of each shift before work begins or after any event likely to have affected the strength or stability of the excavation)? ☐ ☐

Trenching and excavation work can present serious risks to all workers involved. The greatest risk, and one of primary concern, is that of a cave-in. Strict compliance, however, will prevent or greatly reduce the risk of excavation-related accidents.

Some of the protective systems used for excavations are:

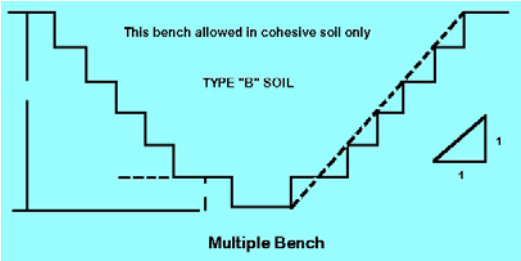
Sloping (sloping system)

A method of protecting employees from cave-ins by excavating to form sides of an excavation that are inclined away from the excavation so as to prevent cave-ins. The angle of incline varies with differences in such factors as the soil type, environmental conditions of exposure, and application of surcharge loads.



Benching (benching system)

A method of protecting employees from cave-ins by excavating the sides of an excavation to form one or a series of horizontal levels or steps, usually with vertical or near-vertical surfaces between levels.



Shoring (shoring system)

A structure such as a metal hydraulic, mechanical or timber shoring system that supports the sides of an excavation and which is designed to prevent cave-ins.

Shield (shield system)

A structure that is able to withstand the forces imposed on it by a cave-in and thereby protect employees with the structure. Shields can be permanent structure or can be designed to be portable and moved along as work progresses. Also known as trench box or trench shield.

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NT WorkSafe is the administrative arm of the Work Health Authority and administers the *Workplace Health and Safety Act,* the *Workers Rehabilitation and Compensation Act,* the *Dangerous Goods (Road and Rail Transport) Act,* the *Dangerous Goods Act* and the *Radioactive Ores and Concentrates (Packaging and Transport) Act* and related Regulations on behalf of the Northern Territory Government.