TOOLBOX TALK #9

Critical Risks – Excavations

Updated October 2017

Identifying, Assessing, Managing and reviewing critical risks is a Canterbury Safety Charter commitment. Remember I AM safe on site where it’s up to everyone on site to understand and manage the critical risks you’ll come across.

Excavations and trenches

Many construction sites require excavation work, particularly trenches. If this work isn’t planned or carried out correctly it may lead to serious injury or death.

There are also general hazards around excavations that should be considered on site. These include falls, tripping over equipment, hazardous atmospheres and falling material.

Step 1: IDENTIFY buried services

All digging for excavations must be planned and carried out correctly to avoid any contact with all underground services. Expect to find services at any depth and consult with all service owners to get plans to show where buried services may be present. Use plans, electronic location devices and hand digging to locate services prior to using mechanical plant. Once located, mark out where they are using location devices on the site plan.

You may want to refer to the Safety Charter toolbox talk #6 Critical Risks – Existing Services.

Q&A

Ask your employees, contractors and sub-contractors to identify some of the major hazards around excavations.

These could be:

- The depth of the excavation
- The soil types
- Vibration
- The presence of moisture, rain, or a high water table level
- Superimposed loading, or mobile plant working close to the edge of the excavation
Thank you to Fletcher Construction and WorkSafe New Zealand for providing information for this toolbox talk.

Where do we get more information?

The Safety Charter’s Critical Risk Excavations webpage has more information which is regularly updated. You can view it here or by clicking on Improve Health & Safety – Critical Risks – Excavations from the homepage.

If you want toolbox talks on the other 12 critical risks you can check them out online.

Step 2: ASSSESS ground stability

While excavations shallower than 1.5 metres may not be considered particularly hazardous, they have been known to collapse. This can lead to serious injury if a worker is in the trench at the time. Safety precautions should be considered.

However excavations that are 1.5 metres or deeper are particularly hazardous. These excavations (where a person is required to work inside, or where there is ground cover overhead) must be notifiable to WorkSafe New Zealand and must be shored unless:

- The face is cut back to a safe slope or benched (with stepped down sides to deal with loose soil) and the material in the face will remain stable under all conditions or work and weather.
- Shoring is impracticable or unreasonable and safety precautions certified by a registered engineer to be adequate, have been taken.
- The type of work and location of workers means there is no actual damage.

Is it a HAIL site?

Hazardous materials may be in or on the ground where excavation or trench work is required. In some cases these properties may be listed on the Hazardous Activities and Industries List (HAIL) in Christchurch. This list is held by Environment Canterbury. If hazardous materials are suspected or identified, stop work immediately and seek advice.

Regular checks

The conditions or the site itself can change within a matter of days. That’s why all excavations must be examined on site before work starts each day, and more regularly after rain or any event that could affect the stability of the excavation face. A record should be kept of this daily inspection.

Also remember to keep the site, and the plant on site, secure and locked away when the site is not in use.

Step 3: MANAGE – safe slopes or shoring

Ask those on site to discuss shoring methods they’ve used, or seen used before – and then compare them to the list below. When shoring is used as a control to manage the critical risk of an excavation, it must be:

- Design-engineered
- Made of suitable material of sound quality and strong enough for the job
- Constructed with bracings, jacks, and struts to prevent accidental displacement
- Installed with packings and wedges that are held by nails or spikes.

Shoring must be placed properly by an experienced person under competent supervision. It must not be altered, dismantled, or interfered with, except on the instructions of the employer or their representative.

Employee issues raised:

Date to be resolved by: