Toolbox talk

Excavations and trenches

Support it, inspect it, protect the edges

10 minutes

For: Groundworkers, plant operators and anyone working in or near excavations

Why it matters

A trench can collapse without warning, even in ground that looks firm. A cubic metre of soil can weigh more than 1.5 tonnes, which is enough to crush or bury someone.

Key points

1. Never go into an unsupported excavation where the sides could collapse. Shore it or batter it back.
2. A competent person must inspect supported or battered excavations at the start of every shift.
3. They must also inspect after anything that could affect stability, such as heavy rain or a fall of material.
4. Record inspections under CDM regulation 24; event reports must not wait a week.
5. Put barriers round the edges to stop people, vehicles and materials falling in.
6. Keep spoil, materials and plant back from the edge so they don't overload the sides.
7. Use a proper ladder or step access to get in and out.
8. Check for underground services before digging, and watch for nearby walls and foundations being undermined.

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Go further: Trench battered back for safety calculator

Sources: HSE: Excavations; CDM Regulations 2015, regulation 22: Excavations; HSE: Managing health and safety in construction (L153); HSE: The safe use of vehicles on construction sites (HSG144).

This talk supports, but does not replace, your site-specific risk assessment, method statement, training and supervision. Free to copy and use. **tradefoxapp.com/toolbox-talks/excavations**

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Do

- Check the excavation has been inspected before you go in.
- Use stop blocks so vehicles tipping into the trench don't go over the edge.
- Keep a ladder in place for a quick way out.
- Report cracks, bulges or water seeping in straight away.
- Get out if the ground starts to move.

Don't

- Don't enter an unsupported trench, even for a quick job.
- Don't stack spoil or materials right at the edge.
- Don't park plant or vehicles close to the sides.
- Don't remove shoring or trench supports while people are inside.
- Don't jump in or climb out using the supports.

Ask the group

- Who inspects our excavations, and where are the records?
- What signs would tell you the sides are about to go?
- How would we get someone out if a trench collapsed?
- What services could be under this job?

If it goes wrong: If there's a collapse, call 999 immediately. Don't jump in to dig someone out, as the sides may collapse again. Keep plant and people back from the edge until it's made safe.

On this site

Nearest first aider _____ Emergency assembly point _____

Site-specific hazards and controls _____

_____

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Attendance register

Excavations and trenches

Site / project _____ Date and time _____

Presented by _____ Company _____

	Name (print)	Company	Signature
1			
2			
3			
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By signing, attendees confirm they took part in this toolbox talk and understood the key points. Keep this record with your site safety file.

Presenter signature _____ Follow-up actions _____

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Quick check

Excavations and trenches

Tick one answer for each question. Your presenter has the answers.

Name _____ Date _____

1. How much can a cubic metre of soil weigh?

- [ ] About 100 kg
- [ ] More than 1.5 tonnes
- [ ] About 500 kg

2. When must a supported excavation be inspected?

- [ ] Once a week only
- [ ] At the start of every shift, and after anything that affects it
- [ ] Only when it's first dug

3. Where should spoil be kept?

- [ ] Right at the edge
- [ ] Back from the edge
- [ ] In the trench

4. The side of a trench starts to crack. What do you do?

- [ ] Finish the job quickly
- [ ] Get out and report it
- [ ] Prop it with your shovel

5. What stops vehicles going into a trench when tipping?

- [ ] A banksman alone
- [ ] Stop blocks
- [ ] A cone

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For the presenter

Answers and sources

Quick check answers

1. More than 1.5 tonnes

HSE says a cubic metre of soil can weigh more than 1.5 tonnes, enough to crush or bury someone.

2. At the start of every shift, and after anything that affects it

CDM 2015 regulation 22 requires inspection at the start of each shift and after any event likely to affect stability.

3. Back from the edge

Spoil near the edge adds load to the sides and can fall in.

4. Get out and report it

Cracks and bulges are warning signs of collapse. Get out first, then report it.

5. Stop blocks

Stop blocks give a physical barrier so tipping vehicles can't reach the edge.

Sources

- HSE: Excavations
  https://www.hse.gov.uk/construction/safetytopics/excavations.htm
- CDM Regulations 2015, regulation 22: Excavations
  https://www.legislation.gov.uk/uksi/2015/51/regulation/22
- HSE: Managing health and safety in construction (L153)
  https://www.hse.gov.uk/pubns/books/l153.htm
- HSE: The safe use of vehicles on construction sites (HSG144)
  https://www.hse.gov.uk/pubns/books/hsg144.htm

> **Presenting tips:** keep it to about 10 minutes, use real examples from your site, ask the group questions rather than reading everything out, and record attendance on the register.

Unsupported trench? Stay out.

1. Inspected before every shift
2. Spoil and plant back from edges
3. Barriers round every edge

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Unsupported trench? Stay out.

1. **Inspected before every shift**
2. **Spoil and plant back from edges**
3. **Barriers round every edge**

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Sources and qualifications

Excavations and trenches

Scope: Great Britain safety legislation unless a nation is identified. Northern Ireland has separate legislation. Site rules can be stricter than minimum legal duties; use the site assessment, instructions and competent supervision.

A4 applicability: no installation-design requirement is asserted in this talk. Its claims are referenced to the subject-specific sources below.

S1. HSE: Excavations

Collapse, ground loading, soil weight, services, safe access, barriers, shift/event inspections and report contents; all key points and quiz.

https://www.hse.gov.uk/construction/safetytopics/excavations.htm

S2. CDM 2015 regulation 24: Inspection reports

Report timing and the limited weekly exception for routine shift inspections; do not delay an event-related report.

https://www.legislation.gov.uk/uksi/2015/51/regulation/24

S3. HSE CIS47: Inspections and reports

Inspection record arrangements; Do/Don't and presenter notes.

https://www.hse.gov.uk/pubns/cis47.pdf

Presenter qualification: Inspection is needed each shift and after stability events. CDM regulation 24 contains the reporting duties and limited seven-day exception for routine shift reports.