



# Safe Work in Excavations

This training program is designed to help you recognize and effectively manage common risks associated with hazardous excavation work



# Training Topics



**Understanding  
Excavation Work**



**Assessing Safety  
in Excavations**



**Hazard  
Identification**

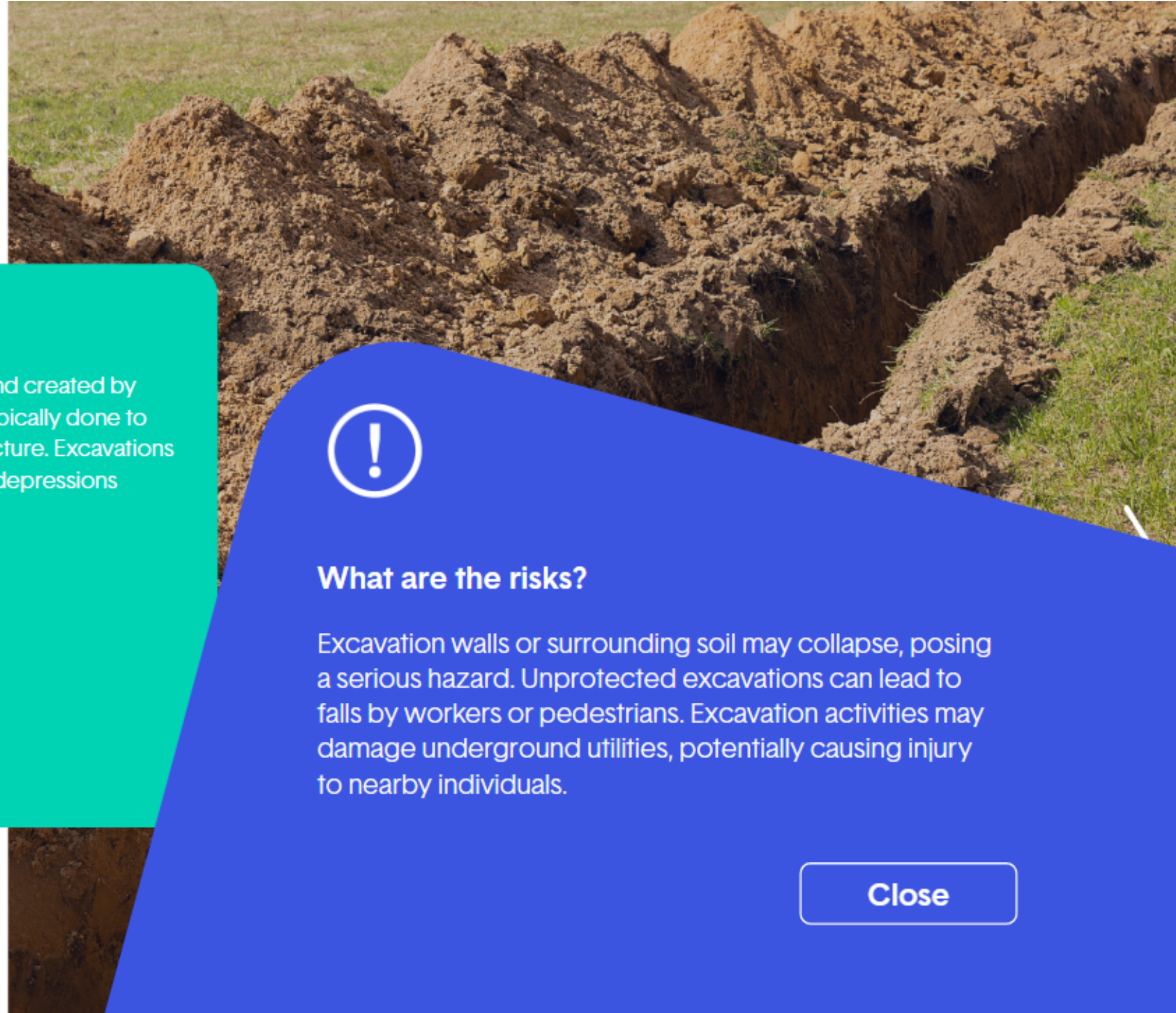


**Safe Practices and  
Essential Knowledge**



**Ongoing work: Is  
Everything Safe?**

# What is an Excavation?



## What is an excavation?

An excavation is a recess or cavity in the ground created by manually or mechanically removing soil. It is typically done to install, repair, or maintain engineering infrastructure. Excavations include any man-made cuts, trenches, pits, or depressions formed by soil removal.

## Examples of excavations

- Pits
- Trenches
- Ditches
- Wells
- Test pits and more



## What are the risks?

Excavation walls or surrounding soil may collapse, posing a serious hazard. Unprotected excavations can lead to falls by workers or pedestrians. Excavation activities may damage underground utilities, potentially causing injury to nearby individuals.

Close

## Is it safe?

**Excavation work is among the most hazardous activities in the construction and energy sectors.**

At Ignitis Group sites, we are committed to applying the highest international and national safety standards to protect our employees from injuries and fatalities.

The most significant risk during excavation is sudden ground collapse, which poses a serious threat to human life.

Additional dangers include potential damage to live electrical cables, gas pipelines, or other critical infrastructure. Such incidents may result in electric shock, fire, explosion, or major service disruptions.



# Hazard identification

It is essential for all employees—regardless of their specific job role—to understand basic workplace hazards. For those working with excavations, strict adherence to technical safety requirements is especially critical.



## Landslides

Excavation walls that are not reinforced or properly lined can collapse, potentially trapping individuals.

Keep in mind: one cubic meter of soil can weigh as much as a small car, making escape or rescue extremely difficult in the event of a collapse



## Falls into Excavations

Unfenced or unprotected excavations pose a serious risk of falls, which can lead to injury



## Damage to Utility Networks

Excavation work may damage underground utility lines such as electricity, gas, water, or other systems. This can result in electric shock, explosion, fire, or flooding



## Water Infiltration

Groundwater or surface water can enter the excavation, increasing the risk of flooding, slipping, or wall collapse

# Safe Practices and Essential Knowledge

## Competence Is Critical

- 1 Only qualified and experienced employees or supervisors may plan excavation work. They must be capable of identifying current and potential hazards and authorized to take immediate corrective actions.
- 2 Workers involved in excavation must be aware of the associated risks and health hazards, understand the nature of the work and its technological processes, and receive proper training and instructions.
- 3 All excavation activities must be carried out under a valid written permit.
- 4 Before starting, it is mandatory to check for underground utilities such as gas lines, electrical cables, and sewage systems. Evaluate soil type, groundwater levels, and other environmental conditions.
- 5 It is mandatory to assess all factors that could compromise the stability of excavation walls, such as nearby traffic or groundwater presence.
- 6 Based on site conditions (soil type, traffic, underground networks, water levels, and excavation depth), determine whether wall reinforcement or sloping is required to ensure safety.

# Safe Practices and Essential Knowledge

It is very important to choose the Right Tools and Equipment.



Always to use personal protective equipment (PPE) appropriate for the task, such as helmets, safety goggles, workwear, and protective footwear



To ensure the work area is properly fenced off and equipped with warning signs and other hazard-reduction measures



Based on the excavation's depth, width, and other parameters, determine safe methods for entering, exiting, and crossing the excavation



Zero tolerance for unsafe entry, no employee is permitted to enter an unprotected excavation under any circumstances



Conduct thorough assessments before and during work. Depending on soil type, excavations deeper than 1.0 meter must be either shored or sloped to prevent collapse



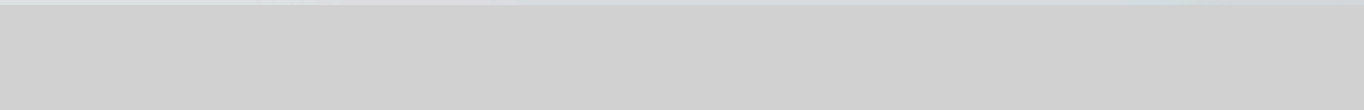
Never enter or work in excavations that contain standing water unless it has been properly removed



A safe distance must be maintained between the edges of the excavation and vehicles, construction machinery, lifting mechanisms, etc.

# Ongoing work: Is Everything Safe?

It is crucial to remain vigilant during all excavation activities. If there is any suspicion of a potential health or safety hazard, work must be stopped immediately.



### Work Suspension

Any employee – especially supervisors – has the right and responsibility to suspend work if unsafe conditions are observed or suspected. **This is a key safety control mechanism.**



### Responding to Changing Condition

If site conditions change (e.g., after rainfall, increased vibrations from nearby traffic, or a shift change), excavations must be re-inspected to ensure all hazards have been addressed.



### Permit Renewal

If unexpected hazardous conditions arise, work must be halted. It may only resume after a new permit is issued and updated safety measures are implemented.



### Resuming Work

Work may only continue – and employees may only re-enter the excavation – once all necessary safety measures to prevent cave-ins are in place and clearly communicated to everyone involved.



# Let's share responsibility

Everyone has the right to stop unsafe work.



## Report incidents



## Start the Conversation

Safety is a shared responsibility – let's talk about it openly



## Keep Learning

Regularly refresh your knowledge on how to recognize and respond to unsafe situations





**Thank you!**

