Curtin University

Permit to Work Guide

Digging / Excavating

This guide is intended for Curtin University's Contractors, Vendors, University Staff, Students, and Permit Managers*. The information contained in the guide is to assist Permit Applicants in successfully obtaining a permit by understanding Curtin's minimum requirements.

Permit Applicants will have control over the way work is undertaken and will be operating under their own safety management system. This includes the responsibility to put in place appropriate control measures to eliminate risks so far as is reasonably practicable, or, if it is not reasonably practicable to eliminate risks, to minimise health, safety, and operational risks, so far as is reasonably practicable.

**A Permit Manager is a person trained and authorised by Curtin University to approve permits.*

properties.curtin.edu.au/working-with-us

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BEFORE PERMIT APPLICATION

1.1 Permit information

Digging/Excavating Permit
To be issued for activities that require the existing ground to be disturbed to a depth of 150mm or greater. It includes work to make an excavation or to fill, or partly fill, an excavation and involves the removal of soil or rock from a site to form an open face, hole or cavity. This includes trenches, shafts and tunnels.

Examples:
Geotechnical investigations, landscaping that involves significant soil removal, grading, or recontouring. Trenching for the installation or repair of underground utilities, excavating for the construction of new buildings or infrastructure.

Please note:
Permit to be submitted minimum **2 business days** prior to commencement of activity, a longer notice period is strongly encouraged.

1.2 Ensure:

- ☐ Contractor Company Status is COMPLIANT on Rapid Global (where applicable).
- ☐ Worker(s) have completed induction(s) for Curtin University (where applicable).
- ☐ Contractor Company and worker(s) hold required licenses and competencies to do the task (where applicable).

1.3 Plan & Consult

- ☐ Discuss works with Permit Manager and investigate potential impacts of digging / excavating.
- ☐ Engage with relevant Curtin University stakeholders to agree on work methodology.
- ☐ Identify all potential hazards associated with the work and outline control measures.
- ☐ Use stakeholder feedback received to prepare required documents for permit application.
- ☐ Consider if other permits are required, i.e Isolation or Confined Space Permit.

Please note:
Identification of services is required prior to commencement of digging / excavating works.

LODGING PERMIT APPLICATION

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2.1 Submit Application

https://properties.curtin.edu.au/working-with-us/permits/

- ☐ **Location Plan** of where works will be done.
- ☐ **Services Plan / Survey Information.**
- ☐ **Work Methodology.**
- ☐ **Risk Management Plan** or **Safe Work Method Statement (SWMS).**

Please note:
Stakes, pickets, posts etc. must not be driven into the ground anywhere on campus, unless an exemption is granted by Curtin University.

2.2 Important

- Prior to conducting works, be aware of the presence of asbestos in the area. Refer to Curtin's Asbestos Management Plan for more information.
- Contact Curtin University's Drawing Services to obtain a copy of plans and latest records of inground services.
- Before digging or excavating, investigate the presence of any concealed services.
- Identification of services is required prior to commencement of works, i.e contact Before You Dig Australia (BYDA) and conduct underground service scans to check locations of essential services.
- Any works being undertaken in the vicinity of underground HV cables requires consultation with the Infrastructure Management team.
- All changes made to in-ground services assets (i.e digging to install new, remove or make redundant of existing assets) shall have in-ground services data prepared according to Curtin's Documentation Deliverables Guidelines.

Please note:
Submission of permit does not constitute an approval. No works are to commence until approval notice email is received.

2.3 Issue Permit

- ☐ Permit Manager approves permit when they are satisfied applicant has met all relevant requirements.
- ☐ Work may begin based on the documentation submitted with the application and in accordance with the conditions outlined in the issued permit.

3 AFTER PERMIT APPROVAL

3.1 Conduct Works

Before proceeding with any work, ensure that the required service isolations are in place.

The Permit Holder will have control over the manner in which work is undertaken and will be operating under their own safety management system to effectively manage the risks involved.

If any issues arise, stop works and escalate to Permit Manager (note: not SCC). Works may only proceed once the issue is resolved.

4 AFTER WORKS ARE COMPLETED

4.1 Close Permit

- ☐ Permit Holder to notify Permit Manager once all works pertaining to the permit are finished.
- ☐ Inspect the area to ensure no hazards remain as a result of the works.
- ☐ Where applicable, Permit Holder to send through relevant documentation to Permit Manager to close the permit.

Frequently Asked Questions (FAQ)

1. What is considered digging / excavating work?

Digging / Excavating work means work to make an excavation or to fill, or partly fill, an excavation and involves the removal of soil or rock from a site to form an open face, hole or cavity. This includes trenches, shafts and tunnels.

2. When do I need a Digging / Excavating Permit?

A Digging / Excavating Permit is needed when:

- an activity requires the existing ground to be disturbed to a depth of 150mm or greater.

3. Why do I need a Digging / Excavating Permit?

The purpose of the Digging / Excavating Permit is to ensure that:

- Ground conditions are determined.
- Location of all essential services (underground, adjacent, overhead and in-situ) are identified and protected or isolated.
- Authorisation from all service representatives are obtained and impacts are communicated to affected parties.

Certain excavation activities, such as digging tunnels, shafts, or trenches deeper than 1.5 meters, or with a fall risk over 2 meters, are considered high-risk construction work. A Safe Work Method Statement (SWMS) must be created for these tasks, detailing risk control measures.

4. Who are some of the stakeholders involved in the Digging / Excavating Permit?

Curtin stakeholders may include but not limited to:

- Drawing Services.
- Infrastructure Management team (Electrical / Mechanical / Hydraulic and Civil).
- Service Managers (Electrical / Mechanical / Hydraulic / Fire Services / Building or Facilities Maintenance).
- Public Places Team.
- Operational Technologies and ICT Infrastructure Team.

Frequently Asked Questions (FAQ)

5. Are there any exemptions for the Digging / Excavating Permit?

A permit may not be required for the following activities:

i) Hand digging for repair / replacement of sprinklers, like-for-like valve replacement, planting shrubs, and surface landscaping activities to a depth of 500mm or less; **OR**

ii) Vacuum excavation; **OR**

iii) Machine digging using toothless buckets up to a depth of 150mm or less; **OR**

iv) Working in exisiting garden beds where locations of underground services have already been identified **OR**

v) Stump grinding less than 150mm.

Persons conducting work must still undergo the Risk Management process and consult with stakeholders to ensure ground conditions have been assessed and all underground services, ducts / pits/ voids / drains are identified and controlled.

A documented Risk Assessment or SWMS detailing the necessary controls required to eliminate or minimise the risks must be completed.

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6. What are some of the training and competencies that may be required for a plant operator in civil construction?

Operators of earthmoving equipment must be competent for the tasks they are required to conduct, and have suitable training and experience.

Trainings may include the national unit of competency for:

- Conduct hydraulic excavator operations.
- Conduct civil construction excavator operations.
- Conduct civil construction skid steer loader operations.
- Conduct wheel loader operations.
- Conduct civil construction wheel loader operations.

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7. What is the recommended duration of a Digging / Excavating Permit?

- The permit should only remain valid for the time required to complete the job or task.
- The permit should not cover multiple crews unless all the hazards and controls have been properly assessed and communicated to all parties involved.
- The permit must be **re-validated** if:
    i. the person with direct management or control of work changes; or
    ii. there is a break in works for an extended period of time.
- A new permit is required if changes are made to the work which introduce new hazards, or new control measures are needed, i.e revised work methodology or type of equipment used.

Frequently Asked Questions (FAQ)

8. What are some of the hazards associated with digging / excavating activities?

- Soil instability, falling or dislodging earth or rock.
- Falls from one level to another (working at heights risk with deep excavations).
- Vibration and noise hazards linked to the use of heavy machinery and equipment for excavations.
- Presence of or possible in-rush of water or other liquids in excavations giving rise to the potential of drowning.
- Excavations can create confined spaces and increase the risk of entrapment, engulfment and exposure to hazardous atmospheres.
- Risk of collision between pedestrians and powered mobile plant (mobile plant operator blind spots).
- Exposure to asbestos, silica dust and / or other hazardous materials, fumes or airborne contaminants.
- Interaction with electrical, mechanical, and hydraulic services causing injury or damage to asset, resulting in events such as electrocution or flooding.
- Impacts to structural integrity resulting in structural collapse.

Other considerations to include when applying for a Digging / Excavating Permit:

- Site access and working environment.
- Public safety – securing the work area.
- Interaction with other trades.
- Length of time the excavation is to remain open.
- Management of surrounding vehicle traffic and ground vibrations.
- Establishing an area for placement of excavated materials, plant and other loads
  - No loads near excavation work.
- Procedures to deal with emergencies.

Frequently Asked Questions (FAQ)

9. What are some common controls associated with digging / excavating activities?

- Ensure all hazards have been identified and control measures documented in the risk assessment / SWMS.
- Ensure all the necessary training, information and instruction is given to all persons involved.
- Assess weather conditions and adjust work practices as required to maintain a safe work environment.
- Conduct a pre-excavation assessment to determine the soil type and stability.
- Use utility locating services to identify and underground or concealed services before work begins.
- Information on underground or concealed essential services must be made available to workers, principal contractor and subcontractors and be readily available for inspection.
- Excavation below the level of the footing of a structure, including retaining walls, that could affect the stability of the structure should be assessed by a competent person* and secured by a ground support system which has been designed by a competent person. Suitable supports to brace the structure may also be required and should be identified by a competent person.
- Use concrete barriers to separate pedestrians and powered mobile plant to reduce the risk of a collision.
- Implement control measures such as sloping, battering, benching, or shoring and regularly inspecting excavation sites to identify signs of soil instability or other hazards.
- Provide safe means of entry into and exit from the excavation and appropriate fall protection where applicable.
- Provide barriers and install clear visible signages around excavations to mitigate risk of falls.
- Monitor vibration and noise levels to identify potential hazards and implement adequate control measures.

Please note:

1. Workers must not be required to work in an excavation 1.5 metres or more deep that is **not** protected by shoring.
2. Excavated slopes considered to be safe may quickly become hazardous due to changes in weather or geological conditions.
3. Workers should not be permitted to work under raised loads and must be protected from loads or objects falling from excavation equipment or other equipment.
4. Ensure a **competent person*** maintains supervision of workers when excavation work is being carried out.

**A competent person should be capable of identifying existing and predictable hazards or dangerous and unsafe working conditions in and around excavations, and be authorised to take prompt corrective action to eliminate them.*

A competent person should have knowledge of, and experience in, the installation and use of protective systems and their causes of failure, and the ability to detect conditions in excavations that could result in cave-ins.