

Underground Services



scope

This guide sets out our minimum operational requirements when working with and near underground services and highlights key safety steps. The risk control plan should also be referred to.

A "Digging and Excavation" permit will be required if digging, penetrating or disturbing ground >150mm. WorkSafe notification is required if deeper >1.5m.

A permit is not required ...when service plans and site inspection give NO evidence of services being in the area ...when we are replacing like for like road furniture e.g. marker posts in a rural location where it isn't practical to get plans ...when grading an existing road or water table.

In these situations the risk control plan must be used to manage any risk of underground services. This may include getting plans or scanning. There are no exemptions when digging >1.5m or soil conditions make collapse likely.

qualifications, skills and training

Only operate machinery and locating equipment if trained and competent to do so.



minimum PPE requirements

additional PPE based on risk assessment controls



Pre-work >150mm review all plans and drawings



- complete planning section of digging and excavation permit
- obtain close approach permit(s) or request a stand-over if needed
- inspect site & risk assess all activities



Onsite checks >150mm

- complete digging & excavation permit
- visually inspect the site for signs of services
- ensure all services are marked by utility providers
- all plans and drawings are to be on site
- mark the excavation / trench with white paint



Double check plans and re-check the mark-outs for; electricity, gas, communications, fibre, sewer, storm & potable water, other

- trained staff, using a locator must scan the entire digging area, (not just where services are expected) ie - scan exactly where you are digging
 - request a GPR scan if unsure



ground penetrating radar (GPR)

- decide on pothole frequency and methodology eg hydro vac, digging with hand tools etc
- identify close approach / stand-over details
- if you cant find a service or discover an unmarked service, stop, reassess the risk and ask for help eg stand-over from service providers
- keep mechanical digging 500mm away from identified services unless you have satisfied the close approach / stand-over conditions
... key strategic assets may require greater clearances
- no teeth on digger buckets and follow safe trenching and excavating practices
- use a trained spotter

4

Finding services



careful potholing using non-conductive hand tools

5

Ground penetrations



- a permit may be required when
- installing guardrail posts
 - installing Waratah standards
 - using scalar penetrometers



6

Remember

- visually check for services before breaking ground eg cables up poles, power boxes, hydrants etc
- always scan the entire digging area (regardless if it has been marked out by utility providers)
- treat all lines / cables as live at all times
- never cut or alter any gas lines, cables or electrical equipment (unless qualified)
- check if services can be de-energised and proved dead

Common surface mark-out colours and symbols

electrical	E
gas	G
communications	T
fibre	F
sewer	SS
sewer	SS
storm water	SW
potable water	W
excavation / trench line	

7



white marks can also indicate a non-defined asset

8

Additional controls

Continually monitor the risks and review and adjust the controls as needed for the duration of the work

- Know what to do in an emergency



Service Strikes
Critical Risk

scan or click for more info and video

