

Excavation safety



Excavation collapses are particularly dangerous.

They can occur quickly, limiting the ability of workers and others to escape, especially if the collapse of a trench is extensive. The consequences are significant—falling earth can bury or crush a person in its path. This can result in death by suffocation or internal crush injuries.

Examples of excavation specific hazards include:

- the fall or dislodgement of earth or rock
- falls from one level to another
- falling objects
- underground essential services including gas, water, sewerage, telecommunications, electricity, chemicals and fuel or refrigerant in pipes or lines
- inappropriate placement of excavated materials, plant or other loads
- the instability of adjoining structures caused by the excavation
- the instability of the excavation due to persons or plant working adjacent to the excavation
- the presence of or possible in-rush of water or other liquid

Striking a buried or concealed service on the estate could result in injury or fatality.

It may also lead to significant impacts to airport operations. Examples of these services include:

- Electrical
- Water
- Gas
- Hydraulic

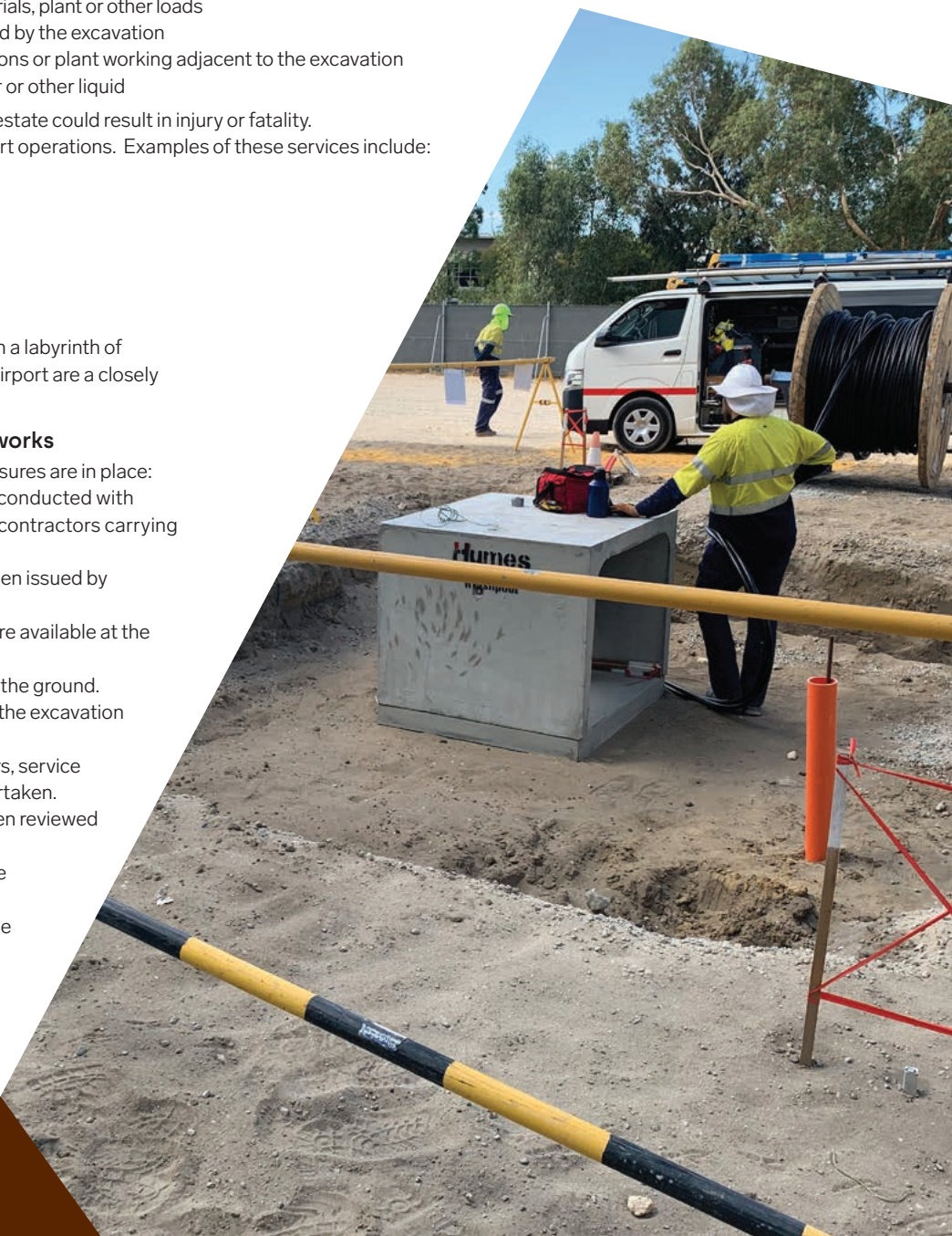
What you need to know

Perth Airport estate is mostly a sandy site with a labyrinth of underground services. Excavations at Perth Airport are a closely monitored and controlled High Risk Activity.

Before carrying out any excavation works

You must ensure the following mitigating measures are in place:

- A Safe Works Planning Meeting has been conducted with Perth Airport, the contractor and the sub-contractors carrying out the works.
- If required, a valid Excavation permit has been issued by Perth Airport.
- BYDA drawings and PAPLs GIS drawings are available at the excavation locations.
- Services have been potholed or marked on the ground.
- Service locations drawings are available at the excavation location
- A review and comparison of Service markers, service location drawing and BYDA has been undertaken.
- A site-specific SWMS is on site and has been reviewed and signed on by all.
- Excavations near HREZ services require the services to be isolated where reasonably practicable. Contractors must liaise with the appropriate asset owner or stakeholder to arrange isolation.





Process for ground services location

Generally, the recommended approach for service detection is as follows:

Step 1 – Service Data Identification:

- Obtain data from BYDA and GIS.
- On-site inspection.
- Scanning carried out to locate services.
- Potholing.

Step 2 – Excavation site identification:

- Accurate marking of the extent and location of the excavation on site.

Step 3 – Service location potholing and marking requirements:

- All services located on site must be potholed and marked using a system of identification that can be maintained for the duration of the work.
- Service potholing frequencies must comply with the requirements of the service owner.
- HREZ services require an increased number of markers.

Step 4 – Excavation perimeter scan:

- A minimum of 3m must be scanned around the perimeter of the excavation.

Step 5 – Marker currency:

- Markers must not be disturbed during works.
- Markers must be removed following project completion.

Whilst carrying out excavation works

You must ensure the following mitigating measures are in place and adhered to:

- Works must be adequately supervised, if works are in close proximity to live services, (e.g. 3 meters from HV) a Service Protection Officer must be appointed.
- No Mechanical Excavation can be undertaken within 1 metre of any Perth Airport Service unless an agreed safe system of work is in place and agreed with the Perth Airport Representative.
- Where excavations are over 1.5 meters deep, excavations must be secured with suitable solid barriers and signage.
- Safe access and egress into or out of an excavation must be provided.
- No item of plant or excavated material should be placed/stored near the excavated area.
- Excavations should be inspected daily by a competent person before the start of works.

Contractors must follow the Code of Practice – Excavation available from the Government of Western Australia Department of Mines, Industry Regulation and Safety.

Incident reporting and investigation

All hazards, incidents and near misses must be reported to your employer. Your employer must notify their Perth Airport representative of any such events.

All incidents must be investigated and a report provided to the appropriate Perth Airport representative.

