Background
This alert follows a number of incidents where underground services have been damaged by hand tools used during excavation works.

Planning
It is essential to properly plan work which may involve disturbing underground services.

- Be clear why the excavation is needed. Eliminate the risk of damaging services by avoiding unnecessary excavation.
- Where possible consult at a planning stage with the service provider/s and/or client body.
- Use statutory drawings or plans to identify what services may be in the work area. Remember these drawings are mostly indicative of where the services are.
- Use detection tools in conjunction with plans to locate the services.

Drawings may not be up to date or completely accurate.

Identify the necessary skills, knowledge, training and experience for those doing the excavation in order to do the work safely.

Management of the activity
Ensure those doing the work are competent to do so,

- Are aware of the risks and safe work instructions
- Trained and competent to use detection tools and signal generators
- Understand safe digging techniques – dig alongside and excavate carefully to the side

Provide clear instruction and check that they understand the task and the precautions to take.

- Workers involved in hand digging must use insulated tools
- and wear flame retardant clothing and PPE
- Use the cable detection tools and signal before excavation starts and during the excavation work

Monitor the work to make sure controls are appropriate and applied.

Permits to dig/break ground should only be issued where there is a safe system of work to be followed. Permits should actively managed and monitored to make sure they are effective in control the risks.

Further Information:
For further information please contact the National Health & Safety Team via email on: NH&ST@highwaysengland.co.uk

Key considerations:
- Is the excavation necessary?
- Appropriate equipment, likely to include,
  - Detection tool and signal generator
  - Insulated hand tools
  - Flame retardant clothing/PPE
- Clear, colour copy of stats drawings
- Look for tell-tale signs such as change of ground texture, fill material, warning tape or ducts.
- Mark service locations, where known, on the ground, and site plans to make them clear to anyone working in the vicinity
- There must be clear instruction on what to do if a service is damaged
- Supervise those involved in excavating near services to make sure the necessary control measures are applied and are effective
- Any changes to works should trigger a revision in the Permit to Work and rebriefing.

Further Information:
Raising the bar (RtB) 9 – Service avoidance
HSG47 Avoiding danger from underground services
PAS128 – Specification for underground utility detection, verification and location