



Every employee and contractor, working for Northern Powergrid, should go home at the end of each shift uninjured and in good health after a productive days work

Safety around excavations

An accident occurred on 23 July 2017 that involved a jointer suffering a serious ankle injury when the side of an excavation collapsed whilst he was rearranging the signing and guarding. As the side of the trench collapsed the jointer fell into the 1 metre deep excavation and twisted his ankle as he landed. The jointer attended hospital for an X-ray where it was confirmed his ankle injury was limited to a sprain rather than a suspected fracture. Nevertheless he will require several weeks of convalescence before he is fit to return to work.

The incident is currently under investigation but even at this early stage it is important to share with you what we already understand to be the cause of the accident.

As you can see from the pictures, the excavated joint hole and trench is in a field of crops and Chapter 8 signing and guarding was not required. Plastic mesh fencing was used to guard the excavation.

The trench was excavated using a mechanical excavator which resulted in the soft clay soil having straight trench sides. The guarding was placed close to the trench side.

Excavations are a daily feature of our work and the routine nature of the work can sometimes create an over familiarity with the hazards associated with work sites and, as a result, a feeling of safety in a hazardous environment. To ensure we create a safe working environment it is important that we do not become blind to, and accepting of, potential work site hazards and that we risk assess the work site, both at the start of the work, as the work progresses and when the conditions change. The stability of the ground and structures around excavations is something to be aware of at all times (joint holes and trenches). In this particular instance the hazard was not recognised as the sides of the joint hole appeared to have been stable.

By way of contrast in relation to the risk assessment of excavations, we received a 159 Hazard & Near Miss where a jointer had correctly “stopped-the-job” due to a joint hole being 1.8 metres deep and having no shoring provided. The job was restarted after the contractor had provided the appropriate shoring for the excavation.

Each route into and out of an excavation has a different set of hazards that need to be recognised and addressed to reduce the risk of a slip, trip and fall event. These should be risk assessed by all members of the team and the agreed safe route clearly communicated to all staff (including contractors) working on site.



Some of the general hazards to look out for and take account of in your risk assessment are shown below.

General safety considerations when working in or near excavations

- 1. Access & Egress** - Always consider access and egress, into and out of joint holes / trenches and take account of any obstacles that may be unearthed and present a trip hazard. If there are obstacles within the trench which impede safe movement then, if not reasonably practicable to move the obstacle, create an alternative safer workaround.
- 2. Excavated materials** - Consider if excavated spoil presents an unacceptable hazard either from falling into the joint hole or blocking access and egress.

Always keep spoil clear of the excavation edges and ensure that at least one side of the excavation is free of excavated material to facilitate access. Under no circumstances should the access route be across excavated spoil, materials or other potential trip hazards.
- 3. Housekeeping** - If site conditions are such that the risk of tripping is high, cease work and take corrective action. Tidy the site as far as is possible and get spoil that is presenting a hazard moved out of the way or off site if necessary. Keep your site risk assessment updated if site conditions change.

Please remember to consider the members of the public who may need to negotiate around the excavation in the fenced off area.
- 4. Excavation sides** - When undertaking excavation work maintain awareness of the depth of the excavation and the requirement for shoring or sloping to prevent the sides falling in.

Ensure the edges of the excavations are not undermined such that the top surface layer becomes load bearing to anyone working at the side of the excavation. Try to keep the same safe route into and out of the joint hole.
- 5. Adjacent structures** - Always maintain awareness that an excavation may affect structural stability of adjacent structures.
- 6. Signing & Guarding** - Make sure the signing and guarding for the site is in place at all times and that the general public are kept out of the excavation area. The signing and guarding is also an important aspect of traffic safety around the work site and the visibility of the works to motorists must be considered
- 7. Weather related impact** - Be aware of the impact that water can have on the stability of the excavation due to its ability to undermine or weaken ground structure.
- 8. Work at Height** – consider working at the edges of a joint hole as a work at height consideration. If there are several obstacles uncovered in a joint hole, reassess the access point and construct a different one if the risk of an accident can be reduced. Stepping into a joint involves a controlled descent of your body weight. If a descent into the excavation becomes uncontrolled due to slip or trip the consequences are a complete unknown and down to reactions and luck.