STORY STOP.

Incident Lessons Learned
Electrified Equipment

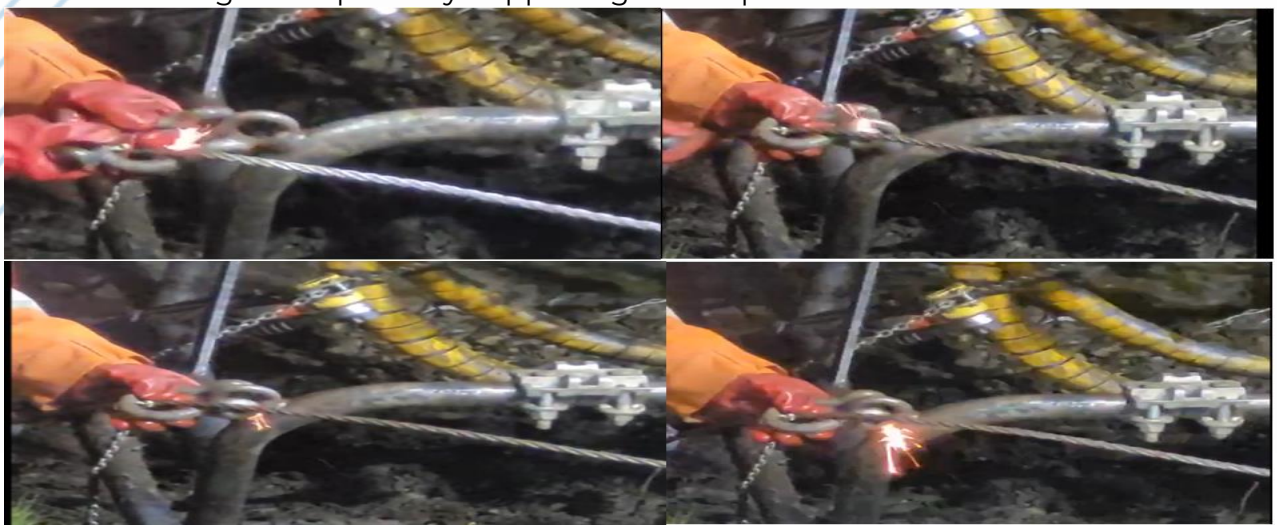
Project Name	Project Number	SCO ref
River Garry Retaining walls	GT00110	
Location (address, ELR)	**Time and Date of Event**	**Type of Event**
	29/08/2024 @ 00:02	Electrical incident-Rail sparking on cantact with tools

What happened?

Incident Report:

While setting up work to install ground anchors for a drilled retaining wall, operatives noticed sparking or electrical arcing while attempting to attach hoist equipment to an RRV using steel rope and shackle equipment.

- No one was injured, but operatives felt a mild “shock” when attempting to attach tirfor wire ropes to a shackle on the RRV.
- The same thing was reportedly happening on the previous shift.



Actions Taken:

- Some local checks were carried out and a process of elimination showed that the problem was likely not coming from the plant in use.
- Batteries were disconnected from drilling rigs and associated nearby plant to rule out any effect they may have had.
- All site works were stopped by the Site manager with all equipment and personnel returning to the compound and off track.
- Senior management contacted to notify of the incident.
- All project works were suspended until cause was established.

Next Steps:

- Signals and Telecoms teams attended the site to investigate and concluded the issue was not caused by Network Rail S&T assets and no clear cause could be identified. Some evidence pointed towards nearby High-Voltage (275 to 400kva) overhead lines running parallel to the track for over 10 miles, which could be potentially inducing a voltage onto NR infrastructure. Which may have been exacerbated by the prevailing weather conditions in the area.
- An M&E Contractor was employed to produce a temporary bonding design to allow the project to proceed.
- The M&E temporary bond design introduce breaks in the rail line and fencing to allow for earth rods to be connected on either side of the works.
- Once the designed solution had been installed the project re-commenced without further issues being reported

Learning Points:

Where similar conditions are found, projects on sections of track without OLE infrastructure where HV pylons run alongside the track over a significant distance the following points should be considered.

- Does the design allow for potential energization of rail, fencing and associated infrastructure?
- Can Test before Touch be carried out during the pre-construction phase?
- Can the energy provider assist the project should the testing show any induced voltage, such as balancing their lines?
- Are there existing earth/bond points, and if not can a temporary bonding solution be designed and installed?
- Have weather conditions been taken into account? (Long periods of inclement weather can impact induction/arcing.)

REMEMBER – If in Doubt - Always treat any electrical equipment as live – Test B4 Touch and confirm in line with permitting procedures.

Report any incidents or accidents as soon as possible to Story Contracting Site Managers, and HSQE personnel who will, where required, then ensure Network Rail Route Control are advised within the required timescales.