NetworkRail

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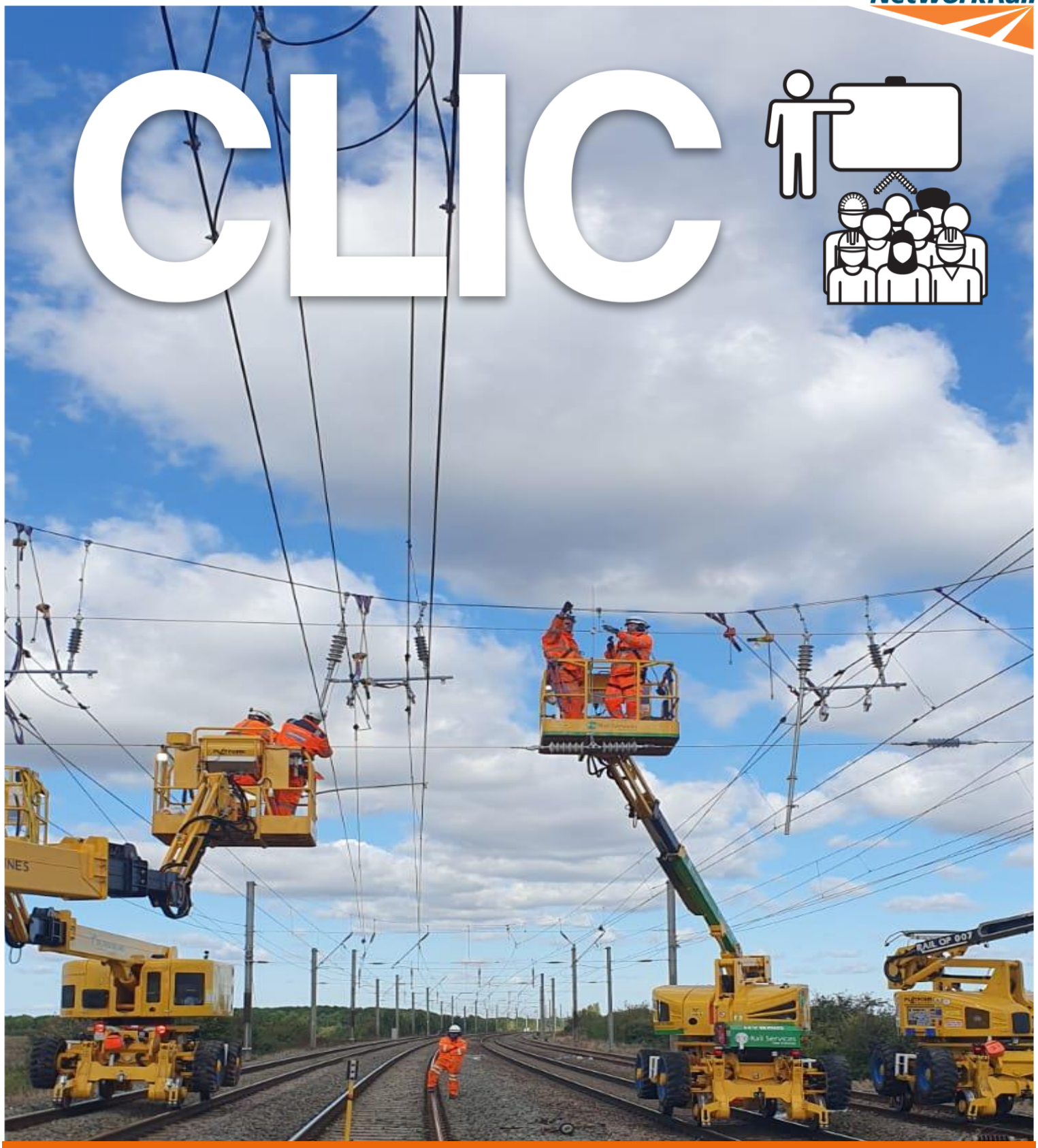

New Headspan Renewal
Midland Mainline Electrification Project, Major Projects and Programmes

Issue 106
2nd October 2024

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SPEED PACE

Continuous Learning & Improvement Cascade

Eastern Routes Capital Programmes

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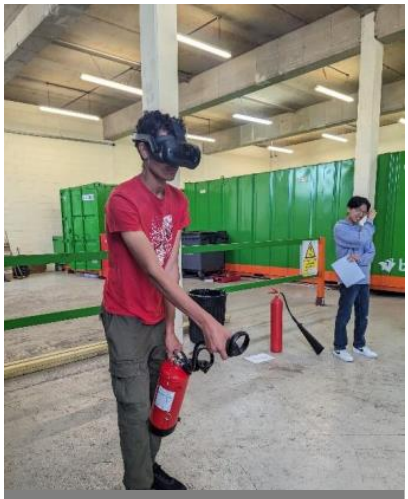
Inspiring the Next Generation in Camden

Background

BAM Nuttall on the Agar Grove bridge reconstruction project in Camden hosted 10 students for a week of work experience in July 2024. The students were in Year 12 (17 years old) and had expressed an interest in civil engineering. The work experience programme was organised by Camden Council who aim to provide every 17-year-old in the borough with meaningful work experience. They match students with employers in their field of interest. The students go through a rigorous recruitment process like what they would experience if they were applying for a job.

Week in action

The group of 10 comprised of students from 3 schools in the borough. This helped students learn and practice their interpersonal and social skills. During the week, the students visited various live sites including Agar Grove, an Access for All scheme, and a station improvement project as well as having the opportunity to find out more about various engineering roles – design, planning, delivery etc..



Student carrying out VR fire safety training

bam

Social Inclusion

Foundational Economy

Social Mobility

Our Impact

- The students learnt useful lifesaving skills including VR fire safety and CPR training.
- The students were provided with information about apprentice programmes at BAM and Network Rail and gained a better understanding of civil engineering.
- The students delivered a final presentation to the rest of the group and senior managers in BAM and Network Rail about their experience over the week. This was an opportunity for the students to provide feedback on their week and gain experience of public speaking.
- The work experience programme has led to many students going on to take up apprenticeship roles with BAM and other industry providers.
- Approximately £36,000 worth of social value was generated through the work experience with BAM.

Work experience students carrying out a site visit

Network Rail Welcomes New Graduates

Last week, we welcomed our new cohort of 12 graduates and Year in Industry (YII) students into Eastern Routes Capital Programmes.

What will they be doing?

Our graduates are enrolled in engineering and project management schemes, while the YII students are focusing on finance, project management, and engineering. They will be based in Derby, York, and Stratford, contributing to our Major Projects & Programmes, Engineering, and Renewals & Minor Enhancements teams.

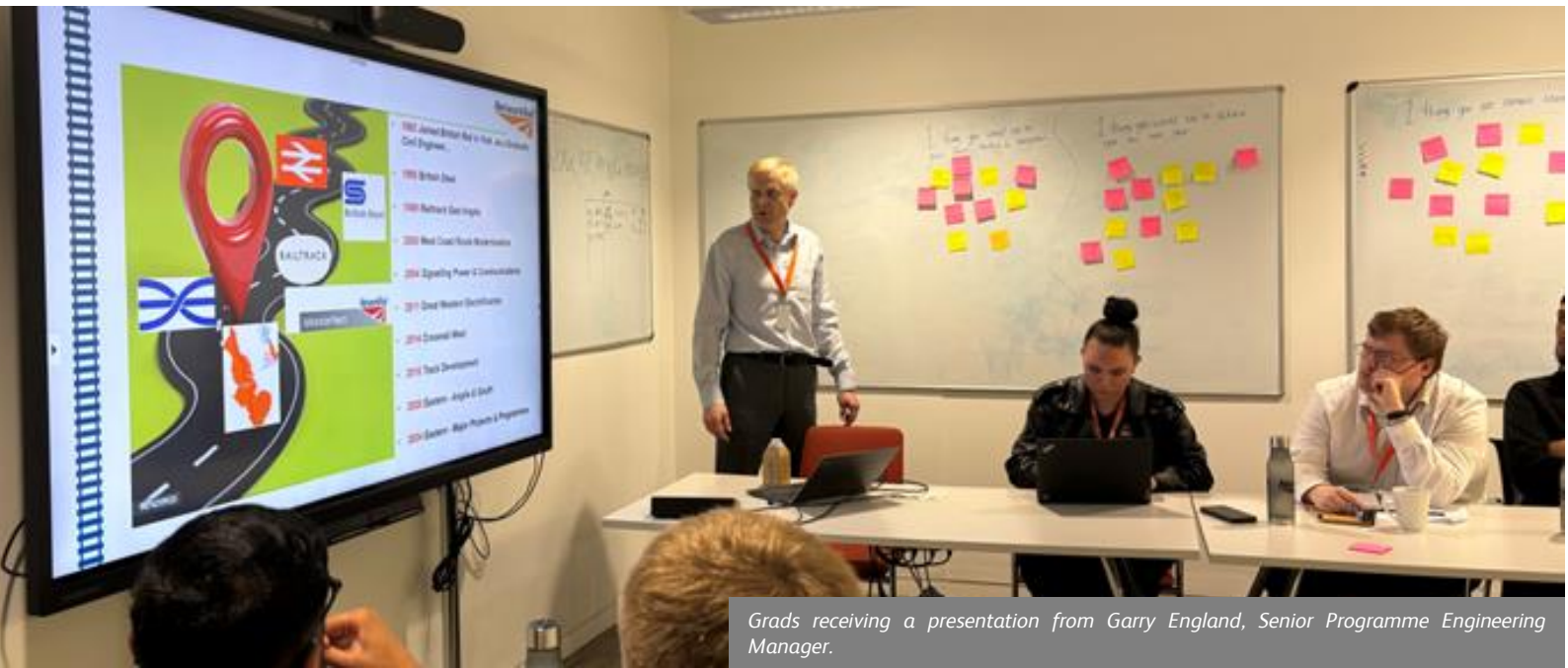
After completing their initial scheme inductions in Birmingham and York, we held a two-day Eastern Routes Capital Programme induction. During these two days, they engaged in sessions led by teams from Safety & Sustainability, Commercial & Procurement, and HR. We also covered topics such as Equity, Diversity & Inclusion and Personal Track Safety.

Why are schemes like this important in our industry?

- The average age of our employees in Eastern Routes Capital Programme is 43
- 13 % of our workforce is nearing retirement in the next decade
- Investing in early careers and future talent has never been more crucial.

We are confident these new starters will have long, fulfilling careers in the rail industry and help us address our skills gap.

As we transition towards becoming Great British Rail, having innovation and diverse thinking is more important than ever. By investing in early careers, we're ensuring the future of our workforce is equipped to meet the challenges ahead.



Grads receiving a presentation from Garry England, Senior Programme Engineering Manager.

Possession Limit Board struck by Passenger Train

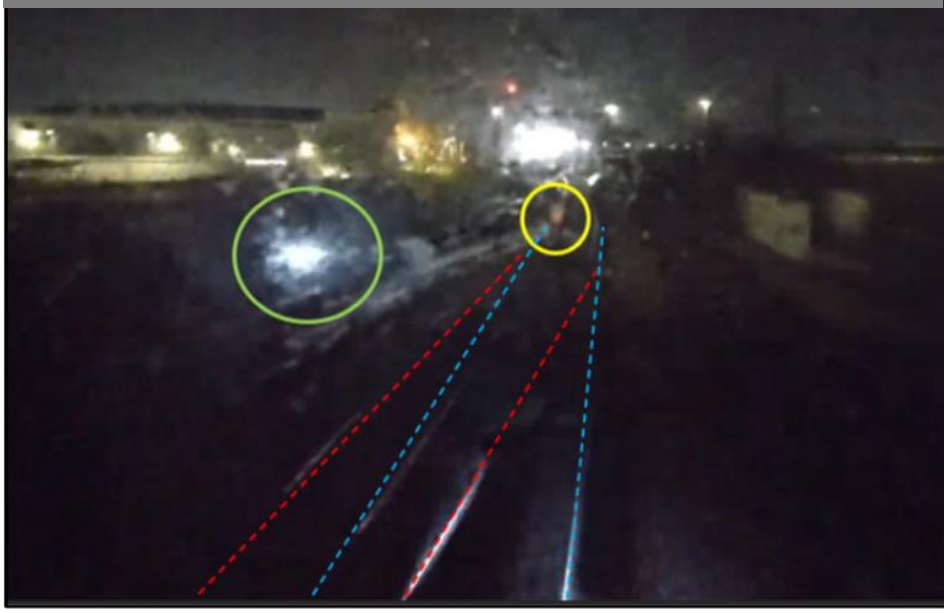
Description of accident

In May 2024, a Goole to Doncaster passenger service, travelling at 19 mph, struck a Possession Limit Board (PLB) on the approach to 2478B points. The train stopped 80 meters from where the PLB was installed. While the train did not suffer any damage, the board's locking mechanism was damaged. The Crane Controller who had just placed the PLB was approximately two meters away from the Down Thorne / Slow line, walking in the cess of the Marshgate Sidings, around four meters away from 2478B points.

Key learning

- The Crane Controller did not attend or receive the final version of the REAL Alliance Whiteboard Pack, which indicated that planned works were interdisciplinary with another alliance partner.
- The Crane Controller assumed the role of the Person in Charge of Sidings (PICOS) despite being informed that they were not the PICOS.
- No clear understanding was reached between the Crane Controller and the Signaller on the actual placing of the PLBs.

The green circle is the Crane Controller's head torch illuminating their position. The yellow circle is the PLB at 2478B points. The red dotted line is the Marshgate Sidings line, and the blue dotted line is the Thorne Down / Slow line that the train was travelling on prior to contacting the PLB.



Improvements since the event

1. Instructions within the whiteboard briefing pack to include the locations of pre-shift briefings, specified times, and clearly state when the works are interdisciplinary with other Alliance partners.
2. Site monitoring and safety tours are being refined to provide a more realistic assessment of how effectively safety leaders control site activities and how their staff collaborate.
3. Personnel rostered for safety-critical roles to attend the REAL Alliance whiteboard briefing. If individuals in safety-critical roles cannot attend suitable other methods to be used to brief contents.
4. All contracting organisations engaged in the REAL Alliance project to provide evidence of their processes for monitoring and assessing safety-critical communications. Network Rail is addressing the quality of safety-critical communications of the Signaller.
5. The investigation report will be reviewed with the Rail Safety and Standards Board to explore the feasibility of enhancing the rules stated in Handbook 13, "Duties of the Person in Charge of the Siding Possession and also improve the prestart planning arrangements.

Safety Advice

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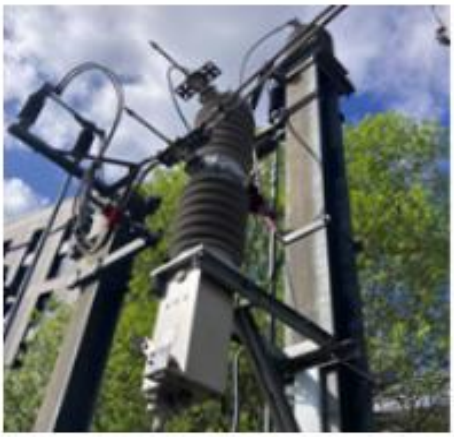
Operational Restrictions on use of FSKII Circuit Breakers



Issued to: **All Network Rail line managers, safety professionals and accredited contractors**

Ref: NRA24-09

Date of issue: 30/09/2024

Location: National

Contact: Dom Banham-Hall, Network Technical Head Distribution HV/LV (Acting)

Overview

- During Test before Earth of an isolation between Finnieston and Rutherglen in Scotland, it became apparent that one of the electrical sections was still live.
- Subsequent investigations have found that a Circuit Breaker, which is an ABB supplied FSKII Circuit Breaker (top photo), had failed in the closed position.
- Whilst an investigation is undertaken, it is necessary to introduce restrictions on the use of ABB FSKII Circuit Breakers as detailed below.
- An update to this Safety Advice will be provided when more information is available.

Failure Mode Detail

- The insulating part of the operating rod (left photo) had become detached from the metal drive rod (right photo).
- A failure of the operating rod in this manner leaves the Circuit Breaker's vacuum bottle sprung closed.
- Whilst this is the first time ABB have seen a failure of this nature and the FSKII is a widely used circuit breaker, further investigations are urgently underway to understand the extent of devices which may be affected by this defect.

Continued on the next page:

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Immediate action required

Identification and Implementation of Operational Restrictions

If there is any uncertainty over the locations of ABB FSKII Circuit Breakers, or the best available option to implement this advice for a particular scenario, contact your Regional or Route (E&P) Engineering team.

Implementation of Emergency Switch-Offs

Where an ABB FSKII Circuit Breaker is being used to effect an Emergency Switch-Off, a second open point shall be created in series with the FSKII breaker before confirming that the ESO has been taken.

Where available, the second open point should be a motorised air-break disconnector (e.g. Busbar disconnector), but otherwise may be the TNO/DNO Circuit Breaker, Feeder circuit breaker, bus coupler, set of track feed circuit breakers or overhead line switches and may be another FSKII circuit breaker.

Implementation of Overhead Line Isolations

Where practicable, the same principle of creating a second open point should be applied to overhead line isolations.

Where such facilities are not practicable to use, then secondary indications (where available) may be used to confirm that the associated circuit breaker has correctly opened (e.g. through a low volts alarm).

The ECO should draft and use a switching schedule to identify the actions being taken to disconnect the equipment and validate the associated secondary indications.

This shall be done before issuing the Form B permission to test and apply earths.

The test before earth and earthing of the equipment is the final confirmation that the equipment is disconnected from the supply and protected against re-energisation.

Investigation of Trips

In the event of any mal-discrimination of the protection system (i.e. Circuit Breakers which are not normally associated with a section or area are seen to operate) and where ABB FSKII circuit breakers may be a contributory cause (i.e. by failure to open) a fault shall be raised against the associated FSKII circuit breaker and it shall be investigated to confirm that the vacuum bottle is correctly operating.

Recent Accidents and Incidents

Date of Incident	Portfolio	Project	Location	Type of Incident / Accident	Event Description
24/09/2024	Buildings & Minor Enhancements	174367 – York Station Roof	York Station Roof	Lifesaving Rule Breach	Operative was seen by the CML Supervisor to not be correctly attaching their working at height PPE to the gantry handrail.
26/09/2024	Track - SRSA	A00132 - SRSA	A120 towards March	Road Traffic Accident	Operative was travelling to site from home, when they approached Thremhall roundabout. A member of the public braked harshly. The operative failed to react in time, and their vehicle contacted the rear of the member of the public's vehicle. No damage caused to either vehicle and no injury has occurred.

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- **Do you have something to share?**
- **Can others learn from your work?**

SCAN ME

Whether it be linked Health, Safety, Environment or Social Value
Please get in touch and email: **clic@networkrail.co.uk**

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