



HSQE Briefing March 2018



Think Safe, Act Safe and Be Safe



Our Safety Vision:

- Our vision of “preventing harm to all” is at the centre of our Safety Strategy and is synonymous with our commitment to resourcing and working safely.
- We believe that our vision can be achieved if we all develop a safe mind-set, plan our tasks correctly and actively seek ways to prevent incidents. We also believe that behaving in a safe way will also lead to zero accidents. We have devised a set of rules that underpins our vision and are consistent with our mantra. **Think safe, act safe and be safe!**



Think Safe, Act Safe and Be Safe



In this edition:

- S.M.T.H. standards have been updated (March 2018)
- Safety Bulletins
 - Work group crossing open lines (With Live 3rd Rail)
 - Worker twists his ankle on site
 - RRV hook fails while lifting 1 ton bags
 - RRV topples over
 - Vacuum lifter failure
 - Electrical conduit accidentally cut through
 - PC Responsibilities, checking paperwork

Action required:

After reading this briefing, you are required to respond, please click **“I have read and understood”** or email lmillard@resourcing-solutions.com with acknowledgement and any questions/suggestions

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S.M.T.H. has been updated.

Signal Maintenance Testing Handbook

All of the SMTH, signal installers, testers and IRSE licenced workers will be receiving a link to view the updated standards from R.S.L.

Even if S.M.T.H. is not your general job role, it will still be worth reviewing and understanding these updates to know how the new standards have changed.





Shared Learning *The Thameslink Programme*

Issue Date: 2nd March 2018 - For further info contact mike.netherton@networkrail.co.uk

Issue Number: TLP085 Title: Work Group Crossing Open Line

Overview of Event:

As part of planned works, a team were tasked with recovering redundant materials within a blockade. The area they were working, was located on a viaduct, 10 roads wide, 8 under possession with 2 open to traffic. The plan was to access and egress the track at 2 different access points, both of these planned routes were located on the side of the viaduct which was under possession.

The COSS who had previously worked in the same area, was aware of an access point located between the two detailed in his plan and decided to take the team across the 2 open roads, to leave the track. *No team members challenged this change.*

While crossing the open lines one of the group noticed a nearby signal displaying a green aspect, at the same time one of the team is reported to have stood on an energized section of conductor rail and received a "tingling sensation". The COSS then realised this part of track was open to traffic and immediately led his team to a place of safety.

Once the group were in a safe place the individual, who had stood on the conductor rail, had his feet and boots examined for burns, fortunately none were visible. The IP was taken to hospital where ECG and other tests were completed and no anomalies were found.

Key Messages:

- Briefings from the ES to the COSS should be clear, concise and the understanding checked before COSS's are allowed to access site.
- COSS's should familiarise themselves with the area under possession including isolated sections, especially in multipart possessions.
- All COSS's should carry out a Live Line Test witnessed by their workgroup before accessing the track and starting work.
- When there is a change of plan, STOP, review, and where necessary seek authorisation.
- Team members should not be afraid to challenge.

Immediate Cause:

- Team crossed an open line.

Underlying Causes

- COSS not paying attention to Engineering Supervisors (ES) brief and ES not checking COSS understanding.
- Negligence by the COSS in not briefing the team as per the ES brief, SSOW pack or Conductor Rail Permit (CRP).
- COSS not carrying out a Live Line Test to demonstrate conductor rail was isolated
- No application of Point of Work Risk Assessment and poor task briefing to the workgroup
- Operative not utilising PTS training in basic track safety and standing on rails.
- COSS carrying out supervisor duties as well as the COSS's duties.

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Actions Taken As a Result of the Investigation:

- Re-training, assessment and monitoring of the COSS involved.
- Implementation of non-working COSS's to remove any conflict between production and safety.
- All Task Briefing documents for work in possessions, with the potential to impact on open lines to be reviewed by the contractor's safety team.
- For future possession work, open lines to be sign posted at the most appropriate point on site as a visual reminder to teams.

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Lost Time Injury from Twisted Ankle at Blackpool

An Operative stepped down from a scaffold tower and went over on their ankle due to uneven ground and suffered a sprain which resulted in 2 days off work.

Details:

The tower scaffold used to access the work was positioned adjacent to a redundant ballast shoulder which meant that the access and egress from the tower was directly onto it. Due to the nature of the work area, the team were briefed that the ground was uneven and possibly slippery. This briefing was given as part of the task brief, the daily hazards brief and as part of the site induction.

The reason that the ballast was covered in visqueen, was to protect it from further contamination during the hydro demolition works.

Risk assessments were in place which identified the hazards however we should follow the Principles of Prevention and remove hazards during the design phase wherever possible.



From the picture you can see that there are many hazards that could cause a trip or a fall. Have a look to see how many there are but more importantly ask the question why haven't these been identified and suitable controls applied. Is it because we do not challenge the way we work enough or are we becoming more accustomed to hazards?

Shared Learning:

Existing Hazards:

Identify these during the initial site walkout and pass them on to the designer so that they are considered during the design phase. In this particular case the ballast shoulder was redundant and could have been levelled off.

Construction methodology:

This should focus on the protection of the individual in the first instance rather than the asset. We actually introduced a hazard by putting down the visqueen.

Monitoring:

When carrying out monitoring activities you must speak to the individuals that are working in the area, more often than not they will tell you what the issues are.

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Failure of swivel hook

Issued to: All Network Rail line managers, safety professionals and RISQS registered contractors

Ref: NRA 18/03

Date of issue: 12/03/2018

Location: Manchester

Contact: Martyn Willis, Rail Plant Support Engineer



Overview

Whilst unloading one tonne ballast bags using an RRV and bag lifter the castellated securing nut on the lifting hook worked free and became detached from the coupling ring. The hook and bag lifter had been used several times within the shift, however as the Crane Controller attached the bag lifter to the next bag of ballast, and instructed the Machine Operator to lift the bag, the castellated securing nut came off and the hook separated from the RRVs boom.

The investigation has identified the failed hook is similar to the yellow one shown in the LH picture above, This has a castellated securing nut with a bronze bush and is NOT designed to be rotated with a load suspended.

The red hook in the RH picture has a ball bearing swivel and can be rotated with the load suspended.

Crane controllers and Machine Operators are to ensure they recognise the type of lifting hook fitted. If they have a lifting hook with a castellated securing nut the load should not be rotated whilst it is suspended.

Immediate action required

- Prior to commencing lifting operations Crane Controllers and Machine Operators must satisfy themselves that they recognise which type of lifting hook is fitted, and its correct method of use.
- The plant hire company involved has instigated a campaign change of all hooks on their machines.

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Overturned Road Rail Vehicle (RRV)

Issued to: All Network Rail line managers, safety professionals and RISQS registered contractors

Ref: NRB 18/04

Date of issue: 27/02/2018

Location: Distillery Sidings, Marykirk

Contact: [Simon Constable](#), Head of Route Safety, Health and Environment, Scotland Route



Overview

During a 29 hour possession the Works Delivery Track team were re-sleeping Marykirk Viaduct. This involved RRVs accessing at Hillside Access Point before traveling north to the viaduct. There were Liebherr machines on site to complete lifting and digging operations and Atlas machines which were intended to shunt trailers up and down the line between the site and the access.

The Liebherr RRVs were running trailers from Distillery Sidings to the access point. The site is long and narrow which resulted in some congestion on site.

To allow for easier access one of the Atlas machines was used to lift a trailer and an attached ballast box. Lifted together, they exceeded the safe capacity of the machine.

The Atlas machine had a log grab attachment fitted. Lifting chains were connected through the log grab rather than removing it and properly attaching the chains. This was a contravention of the contractor's policy. The Atlas machine was in dig mode meaning that the safe load device (a Rated Capacity Indicator - RCI) was inactive for the lifting operation. The trailer and ballast box were lifted and as the machine swung round it overturned, coming to rest on its side on top of the trailer.

Fortunately, neither the driver nor crane controller were injured.



Discussion Points

While we are investigating the incident please discuss the following with your team:

- How do we control movement of machines within a congested worksite?
- What should be contained within a lifting plan?
- How should a Crane Controller and POS Representative check whether an RCI is in operation before supervising a lifting operation?
- How do we identify what attachments should be used for each task involved on site?
- What signs would you look for to indicate whether staff operating or supervising on track plant were working safely?
- How should changes to lifting plans be reviewed, authorised and communicated?

Copies of Safety Bulletins are available on [Safety Central](#)



NetworkRail

Shared Learning

COSTAIN

The Thameslink Programme

Issue Date: 9th February 2018 - For further info contact sharon.fink@networkrail.co.uk

Issue Number: TLP084 Title: Vacuum Lifter Failure

Overview of Event:

Whilst a Glass Reinforced Concrete (GRC) panel was being installed at height, the vacuum lifter failed. A Spider Crane using a GSK1000 vacuum lifter (with a Safe Working Load of 600kg for a vertical load) was being used to lift the 240kg panel into position.

The panel locates on fixing arrangements, top and bottom of the panel, to the secondary structural steelwork previously installed. The GRC panel had been located onto the bottom 'J' brackets of the structural steelwork. At this stage, the vacuum lifter remains attached until the alignment of the panel is complete and the top fixings can be completed. The installation had been completed and a survey undertaken to confirm exact position. The survey identified that the panel needed to be removed to allow 1No. bottom bracket to be adjusted. In the process of removing the panel, the seal of the vacuum lifter failed and the panel tilted towards the crane coming to rest on the end of the crane jib. The operatives in the basket of a scissor Lift positioned immediately in front of the panel restrained the panel by pushing it back into the vertical position [the bottom of the panel was located preventing it from dropping].

General Key Messages:

- Lifting arrangements need to be clear, documented in a Lift Plan and carried out by competent personnel.
- All equipment used for lifting requires identification and routine checks for condition.
- Specialist lifting equipment i.e. vacuum lifters, should always be operated by personnel with additional training and plant familiarisation.
- On site observations of lifts should be undertaken to identify failure points.

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Actions Taken / To Be Taken as a Result of the Investigation:

- The continuous angle design has changed to eliminate potential proximity hazards that can result in the panel snagging underneath the angle. In areas where this cannot be removed, additional controls have been introduced. e.g. Hold Point to review Proximity Hazards.
- Only approved crane operators who have been assessed and formally approved with an appointment letter will undertake lifting with the vacuum lifter attachments. A limited number of 2 teams have been identified to carry out these tasks.
- A new Task Briefing Sheet (TBS) was produced which included prescriptive requirements for the safety critical steps of the activity e.g. Crane Supervisor to survey in detail the intended location of the panel to identify proximity hazards.
- The Lift Plan was revised to include elimination/avoidance of proximity hazards & hold point to make sure the panel fixing location is surveyed & Crane Supervisor inspects final position of GRC panel prior to lifting to identify any such hazards.
- In every case, the Supervisor or Crane Supervisor must undertake a Point of Work Risk Assessment (PoWRA) before starting the lifting operations – this will assess the actual against the planned works i.e. test if the TBS and Lift Plan are accurate. If there is any deviation from the Lift Plan, then the Appointed Person must be consulted.
- Where head and panel size allow, the use of the Hyraulica 600 will be considered in preference to the GSK 1000. The project will continue to evaluate other vacuum lifting equipment.
- Inspection and Test Plan (ITP) for installation of GRC panels to be peer reviewed to investigate opportunities to reduce the amount of lifting. Separate follow on workshop to be arranged between delivery team, quality and lifting team.
- Secondary slinging re-reviewed but found not to be practical for these installations where no-go areas can be enforced.
- The use of robotic vacuum lifting equipment to be considered for lower loads due lifting capability and reduced manual guidance of loads.

Causes:

Immediate Cause – Sudden and complete loss of suction due to the failure of the vacuum lifting device pad seal and consequent detachment of the vacuum lifting device from the load being 'lifted' [the GRC panel] following incorrect verbal instruction between Crane Supervisor and Crane Operator.

Underlying Causes :

Design - The continuous angle that was fixed to the top of the structural steel to which the panel was going to be fitted presented a hazard to lift the panel.

Training - Whilst the Crane Operator had 6 continuous months operating spider cranes, he had only 4 days (15 no. GRC panels) experience of lifting GRC panels.

Procedure - The TBS did not prescriptively set out the safety critical steps associated with panel installation there was an absence of a hold point requiring the Crane Supervisor to ensure that the fixing was free of proximity hazards {e.g. continuous channel}.

Procedure- Whilst a Lift Plan was very comprehensive and detailed it did not have the hold point requirement for the supervisor to survey the intended fixing location before lifting a panel in to place.

Procedure - A PoWRA was not done and this was a missed opportunity to identify minor changes that were required to carry out the task safely.



Shared Learning

The Thameslink Programme

Issue Date: 08 March 2018 - For further info contact sharon.fink@networkrail.co.uk

Issue Number: TLP086

Title: Electrical Conduit Cut

Overview of Event:

Whilst undertaking 'soft stripping' works, an operative cut through a live conduit using a reciprocating saw. The isolation certificate issued for the works had not taken into account a live conduit which had previously been installed above a false ceiling. The operative believing the conduit was part of the soft strip cut through it in preparation for removal.

The conduit was cut through during the day shift works and the operative did not realise he had cut through a live conduit. It is believed that the main distribution board tripped instantly. Later the same night, the external façade lighting failed to switch on. This highlighted there was an issue. It was at this point the on-site electrical nightshift team identified the damage.

General Key Messages:

- All known services must be identified on service drawings and made available to those responsible for works.
- Anyone providing isolation permits must make sure all services are identified and clearly marked up for removal (in this case orange ended as it is a local process).
- Supervisors must make sure that anyone working around electrical services understands the identification marking for any services to be removed .

Photo of Event :

Photo of electrical feed that was cut



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Causes:

Immediate - The cutting of a live electrical conduit with a reciprocating saw.

Root and Underlying Causes

Error-proofing conditions: An Isolation Certificate had been completed, however, this document was substandard and did not detail the location of the live electrical conduit as part of permanent work.

Procedure: In providing the isolation certificate there was a missed opportunity to check all service drawings for the unit. These drawings were in a separate design packs. There were temporary works design packs and permanent works design packs.

Procedure & Communication: There was a failure to inspect and check the location of all services in the retail unit with marked up services drawings and therefore these were also not made available with the isolation certificate work pack.

Procedure: The works proceeded at risk based on the Demolition Supervisor assumption (having worked previously in that same general location) that services were not live.

Procedure: The project has worked to an informal procedure where all cut ends are orange ended requiring all to work away from the cut end. The Demolition Supervisor believed the cables routed in cable containment above the false ceiling were isolated and proceeded with the removal of conduit however the cables had no orange end markings on them.

Actions Taken As a Result of the Investigations:

- The orange end process has been documented and communicated to all project persons to include services that are cut and removed from the work area and where removal is not feasible then isolated services be clearly "orange ended" at sufficient locations such that the operatives undertaking the works can clearly see the service. If any live services remain live in the area they must be clearly marked and protected on site.
- The process for recording services – both 'as built' and 'as designed' will be improved. This will give up-to-date information and a simplified protocol of access to this information and will include a control on the permit to ensure location information is recorded.
- The revised isolation certificate now includes the requirement to undertake joint site visits to the area prior to any works. The permanent and temporary design drawings are to be reviewed and confirmed by the CRE for Fire Alarm, Electrical and Mechanical services representatives prior to work commencing.

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Principle Contractor Responsibilities

Details:

During a site visit by Network Rail's Head of Safety & Sustainable Development to Parkfield Road Overbridge Reconstruction project, significant shortfalls were found regarding competency records, plant certification and briefing checks.



Planning is the key. Ensure that you have input from all functions in both the supplier and NWR organisations as the project progresses through its phases.

Shared Learning:

- During the T Minus process identify what documentation is required to be reviewed and at what stage e.g. WPPs are required 28 days prior to the work starting. The IP Renewals team are looking into how this can be mapped.
- When reviewing the Construction Phase Plan or Work Package Plans the checklists held on Safety Central should be used for consistency by both the Supplier and the Project Team.
[CPP Checklist](#)
[WPP Checklist](#)
- Responsibilities of key individuals need to be defined and ensuring sufficient time to fulfil them is allocated.
- Adequate safety support needs to be provided by the supplier during the core works.

Finally remember



If it cannot be done safely all the time then it will not be done at anytime
Andy Gent—IP Central Regional Director





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