

# Keeping our track workers safe: a 'matter of concern'

**Dr Stephen Fletcher**, Director and Occupational Psychologist at the OPC shares some work and initiatives with track workers and track maintenance organisations focused on developing safer working behaviours and improvements to safety culture



The OPC has worked in the rail industry for over 30 years. Their Psychologists and Assessors have successfully worked alongside rail operators, employees; with track rail engineering agencies, Network Rail and other engineering operators.

Saying that maintaining the vast network of track and other associated assets is a huge undertaking is an understatement. It can include planned maintenance work and checks; unplanned repair and replacement work, removal of debris or objects; repairs in tunnels or embankment 'gardening'! Employees doing track and engineering work are a special breed of person. They operate in a dangerous environment every day, and they face many risks. It is therefore crucial that they have the right skills and personality traits to help make them safe and effective workers. If mistakes and errors occur then the impact can be enormous and potentially fatal.

Ensuring track worker safety is of 'critical concern' for our rail industry. The OPC's work over the years to enhance and improve track worker safety has included, but is not limited to; organisational safety culture work; developing safe working behaviours in track workers and applying motivational techniques to encourage personal safety accountability. They also undertake Post Incident Assessments (PIAs) with track workers involved in safety incidents to help improve their personal safety as well as feed into operators' continuous safety improvement programmes.

## So, what makes a safe and effective track worker?

OPC Psychologists believe there are some important Non-Technical Skills (NTS) that help make safe and effective track workers, and also help contribute to the prevention of errors or incidents:

- Risk anticipation and time patience are essential NTS when working in a safety critical environment in any role, but especially for track workers.
- It's important that track workers are actively vigilant for safety hazards, warning signs, or changing events that could negatively impact on theirs, or other team members safety. In a recent RAIB report of a fatality involving a rail worker near Surbiton, one of the RAIB conclusions drawn was that the COSS had been 'distracted from his primary safety critical role and that this may have been a causal factor in the fatality.'
- Safe and effective track workers need an ability to understand and reason with basic written rules, regulations and procedures. Strict compliance with safe working rules, behaviours and procedures regardless of role, functional activity or seniority is imperative to all track workers safety.
- An individual who displays the key attributes of checking, conscientiousness

and rule motivation means jobs are completed to a high standard and safety incidents are more likely to be avoided.

These NTS have been identified through in-depth analysis of the Track Worker role undertaken by the OPC which also included a leading research project commissioned by the Health and Safety Executive HSE.

## Assessment tools that work

The aforementioned NTS can be put to good use as part of a recruitment process for track workers. OPC Assessment has a wide range of online assessment tools that are valuable for identifying the key abilities and NTS when recruiting for many safety-critical roles. Some of these include: The Risk and Time Focus Questionnaire (RTQ) that helps profile a candidate's behaviours and attitudes towards risk anticipation, risk management and time focus. The Safe Concentration and Attention Test (SCAAT) is a world leading safety test used on the railway assessing for concentration. The Rules Acquisition Aptitude Test (RAAT) can help assesses an individual's capacity to learn key rules and procedures in training and stick to them when on the job. Additionally, the Safe Personality Questionnaire (SAFEPQ) assesses for 4 personality factors; Cautiousness, Conscientiousness, Resilience and Rules Focus that are linked to safe behaviours in the rail industry.

Some of these tools have been statistically linked with training and job performance in track workers. So, there is evidence showing that these assessment tools can help identify, at recruitment those track workers who are more likely to perform better in training and safer on the job.

## Running development programmes for specialist track worker roles

OPC Psychologists were approached by a rail maintenance company who'd been involved in a train derailment in the South of England.

Planned maintenance work had been undertaken and the Trackback Assessor (TA) was confident in the quality of work completed, and so had handed the track back. Approximately nine hours later a train derailed. The company undertook a wide scale investigation and human factors was considered as a key development area for its TAs. TAs are key to ensuring the safe return of track at the right time, and at the right speed, but the nature of their role can be high pressured with other rail personnel waiting for the track to be handed back so that normal rail services can resume.

Working alongside the organisation, OPC Psychologists designed a one-day workshop that explored NTS and the human factors of TA's and how they might improve their safety performance. To enhance self-awareness each TA completed the SAFEPQ that assesses four key personality-

orientated NTS. Each TA received in-depth feedback from an OPC Psychologist and they were encouraged to prepare a safety performance improvements development plan for implementation back at work. Hundreds of Trackback Assessors took part in the programme that lasted for over 4 years.

The OPC team undertook statistical analysis of the TA's SAFEPQ assessment scores and also gathered feedback on each TA's safety performance from their line manager. The analysis evidenced that over time the TAs demonstrated an improvement in their safety personality. Additionally, the SAFEPQ results also showed a strong link to a TA's on-the-job safety performance as measured by their line managers. Therefore, the OPC believes that personalised development plan interventions using NTS and human factors can help to improve the safety of track workers.

## Identifying track workers' development needs

OPC Psychologists have been using the Post Incident Assessment (PIA) process for many years with rail employees who may have been wholly or partially responsible for safety incidents. Over 500 employees have taken part in the PIA process, mainly train crew employees. More recently PIAs have been applied to track workers involved in safety of the line incidents (SOL) with very positive results. The aim of a PIA is to help uncover NTS shortfalls that may have led to a safety incident, and to assist the employee in learning, developing or improving these NTS to avoid future incidents. OPC Psychologists will often use a range of tools and techniques including interviews and psychometric tests as part of the PIA.

In a recent piece of work, two PIAs were undertaken with a COSS and his assistant who were working near live rails setting up possession boards and detonators. The PIA uncovered some key NTS shortfalls including a failure to anticipate risk, insufficient checking and a lack of assertiveness that all contributed to the safety incident. The incident could have been fatal. If the COSS and his assistant had demonstrated these key NTS then there is a strong possibility the incident may have been avoided.

Another recent PIA involved a Signaller who'd provided a line blockage to a track worker whilst a train was in that section. The Signaller's PIA identified a number of NTS shortfalls that contributed to the error and therefore exposed the track workers to a serious near miss. However, the PIA with the track worker identified excellent application of the NTS of risk anticipation and checking immediately prior to the near miss. These NTS probably saved his life and that of his colleague. The OPC encouraged him to continue demonstrating his NTS strengths and, as a leader, to facilitate his work colleagues to demonstrate these key lifesaving NTS too.



# Discover potential. Drive performance.

With over 20 years' experience working in the rail industry, at OPC Assessment we offer an extensive range of practical, reliable and innovative assessment tools to help you improve performance and assess suitability for a wide spectrum of roles.



For more information, visit [www.theopc.co.uk](http://www.theopc.co.uk) or email us at [admin@theopc.co.uk](mailto:admin@theopc.co.uk)

One Wellstones, Watford, Herts, WD17 2AE +44 (0)1923 234646



IMAGE CREDIT: iSTOCK

## Enhancing the safety culture of track workers

The OPC were approached by a UK rail maintenance contractor who were concerned about the frequency of safety incidents amongst its track workers. The organisation was keen to find and pilot some new psychological techniques to help improve safety performance in one of their depots. The OPC recommended using Group Decision Technique (GDT) specifically designed to increase the safety motivation of track workers and their associated team managers. This simple and relatively unknown, untapped technique has been used in both Japan and Sweden to improve safety performance of bus drivers and telecom drivers respectively, with really positive results.

Firstly, the OPC team briefed managers on the GDT and trained them on how to facilitate safety discussions with their track workers. This was supported by OPC Psychologists meeting with groups of track workers, and their line managers, to discuss and debate safety issues being experienced on the tracks/at work. These meetings took place monthly, over a whole year. At each session the trackworkers were encouraged to share ideas/initiatives that the organisation or their managers could undertake to help improve safety. Many of the requests were basic but very important such as ensuring a continuous and readily available supply of PPE or having a well-stocked materials and

products store with essential equipment for maintenance work – thus avoiding begging or borrowing scenarios.

Each month managers would take away the track workers 'Actions' list. At the next month's session, they'd provide responses and updates to their team's requests e.g., 'Solved', 'In Progress', 'Referred up the chain' or 'Unachievable'. Many actions were resolved to the satisfaction and sometimes to the surprise of the track workers. This GDT for resolving safety issues helped create a local and strong safety culture. Safety was being given an elevated status. Additionally, employees felt listened to and their requests acted upon.

Once this new, stronger safety culture had been established in the depot, the track workers were also involved by making safety improvement commitments. Each worker was asked to complete an ID-sized 'Pledge Card', detailing their safety improvement action. They signed the card and placed it somewhere they could see it on a daily basis. These Pledge Cards helped create an individual commitment and responsibility to track working safety.

## Impact of the GDT

At the end of each monthly session the track workers were asked for feedback. Over time, attitudes to safety improved with the team providing really positive comments about changes in safety culture. However, more importantly, safety incidents

declined too. The depot enjoyed a 40 per cent reduction in safety incidents over two years vs a 50 per cent increase in safety incidents at a local 'control' depot that had not piloted GDT. Following this successful pilot in the initial depot, OPC Psychologists were asked to implement GDT in other depots across the UK for the same operator and for other rail organisations. Given its successful application and impact on safety performance, there is certainly an opportunity for GDT to be applied more universally and consistently across the industry.

With the recent publication of a report (RAIB) into a track fatality, we need to apply more of our skills and expertise into helping improve track worker safety and enhance safety culture in our track organisations. It is sobering listening to track employees who've just escaped a life-threatening incident. It focuses my mind and should encourage all of us to do more to invest and implement initiatives that make an impact on safety and improve track worker wellbeing. Track worker lives depend on it. Inductions, training and development around NTS, as well as development programmes with track workers and safety culture initiatives such as GDT are great advancements and they can all bring positive safety benefits.

Tel: +44 (0) 1923 234646  
Email: [admin@theopc.co.uk](mailto:admin@theopc.co.uk)  
Visit: [www.theopc.co.uk](http://www.theopc.co.uk)