

Engagement Action Bulletin
Learning from Safety Action Groups

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| Date: | 09/13 | Originator: | DM | SAG/Region/Contract | GNGE |
| Title: | Instant Barrier | | | | |

Carillion Rail recognised that there is significant merit in terms of the safety of track workers in the development and use of a physical barrier system to provide segregation from live rail traffic on work sites adjacent to open lines. Deployment of such a system would lessen the risk of the workforce coming into contact with trains or other on track plant.

While outwardly similar in concept to existing fencing systems such as 'Vortok'. Carillion Rail's intention was that this would be in the form of a quick and easy to install rail head mounted barrier segregation system as opposed to standard offset fencing available and used in the rail industry.

The proposed system would initially be used to enhance the use of Site Warden protection by providing an additional physical means of demarcating the edge of the safe zone 2 metres from open line. It is likely that if the proposed system performs satisfactorily, the barrier could also provide general segregation of work sites and demarcation such as isolation limits in the rail environment.

Carillion Rail reviewed the existing rail equipment supplier base to ascertain if any suitable products were currently available in the market place. None that provided a solution to our specific safety requirement were identified.

Potential design concepts were developed through 'brainstorming' at the Carillion Rail Safety Forum. The GNGE project has taken the lead in developing and promoting the Instant Barrier.

From these initial concepts, options were taken forward and discussed with a number of Carillion Rail's existing supply chain partners. A proven rail industry equipment supplier was selected to work who understood our requirements.

The supplier selected was Skillfast Ltd who had previously designed and manufactured a prototype from a similar concept but needed help and support in developing this further for use on rail infrastructure. Carillion developed a comprehensive trial proposal document to allow a structured approach to testing, live trials and then refining the product design. The product is known as Instant Barrier.

The Instant Barrier system has been designed for quick installation in time and space restricted sites. It has a simple single action push lock clamp attachment to the rail head and is simple and intuitive to use.



Posts are lightweight yellow plastic with integral spring loaded reels containing yellow and black retractable cloth webbing of about 3m in length.

The posts come on their own storage stillage, with 28 posts per stillage, which can be transported or positioned by a forklift. A standard rail trolley can be used to transport 200m of barrier.

It has been demonstrated that a post and double tapes can be erected in approximately 15 seconds, therefore a standard gang could erect 200 metres in about 10 minutes.

Throughout the trial process there has been great emphasis on gaining feedback from managers, rail specialists, safety practitioners and the workforce. Views have been sought from a number of senior people in Network Rail who have unanimously gone on to support the concept and product during its development phase as an enhancement to safe systems of work on the railway infrastructure. The concept has also been discussed with the Office of the Rail Regulator with positive feedback on the proposal.

It was vital that the opinion of track workers who have experience of what may or may not work practically in the live working environment and potential improvements were sought.

The Instant Barrier was observed by both managers and operatives from various disciplines and backgrounds. It was universally deemed by those involved in the initial trials to be a good system in concept, and in design and construction. A great deal of benefit can be perceived through appropriate use and in the right working environment in providing enhanced protection to track workers, where risk from contact with trains or other plant and equipment is evident.

Carillion entered Instant Barrier for Network Rail Product Approval and gained certification for use by the industry at large

There have been a number of improvements in product design and manufacture that have been fed back to the supplier with subsequent minor improvements made to ensure continuing robustness in use.

The development and trial process conducted at the GNGE project has fed back to the Carillion Rail Safety Forum that Instant Barrier is appropriate to consider use in the following (not exhaustive) scenarios:

- During Line Blockages (Site Warden Warning) where the Instant Barrier can be used to enhance the enforcement of the safe limits of the work area. This is by providing a physical warning barrier that should not be deemed a fenced system.
- To provide general segregation of operational plant or engineering trains from on-track workers. This could be in blockades or depot environments as an example.
- To demarcate; limits of isolation, prohibited areas or protection.
- To show walking routes.

Based on trial results Instant Barrier will perform the functions Carillion require as a segregation barrier and significantly reduces the risk of contact by the workforce with trains and other plant and equipment.

This Bulletin is a result of Worker Engagement Feedback at one of our Projects

Is there anything you can be doing differently as a result of this bulletin?

Going forward we would have no hesitation, if an area would benefit from being a designated Pedestrian Walkway, of carrying out In house

Contract Name: _____

Signed by Contract Head _____

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