

Camlin Rail

A Partnership with Network Rail



camlin rail



Introducing Network Rail

Network Rail owns, operates, and develops Britain's railway infrastructure consisting of 20,000 miles of track, 30,000 bridges, tunnels and viaducts and the thousands of signals, level crossings and stations. Managing 20 of the UK's largest stations with high frequency routes and significant passenger numbers to keep moving, it's essential to monitor performance and minimise disruptions.

To enable this monitoring, Camlin Rail provide two innovative solutions to Network Rail: **Signet** – Reconfigurable Signalling Power and **PanVue** – Pantograph Monitoring.



Over 20 years of partnership



2500 Signet



20 PanVue

"Camlin Rail are specialists. The team are great to work with, resolving any issues quickly and pro-actively, whilst maintaining a high level of technical support. Over the years, the value of their products has been proven - saving the business millions"

— **Dean Chauke**, Regional Engineer for Electrification & Lines, Network Rail

A Trusted Partner

With reputation on the line, Network Rail discovered delay rates were becoming an increasing issue. The conventional power system, double end feed, would not satisfy the design criteria for power to be restored in under 60 seconds. To rectify this issue, the project team involved in the West Coast Main Line (WCML) modernisation approached the market for a system that would automatically restore power, within the specified timeframe. Following design and first prototype development, Camlin Rail were successfully awarded the project to design, manufacture and install 500 Signet units on the West Coast Main Line.

From this initial project, Signet has been Network Rail's approved reconfigurable signalling power system and Camlin Rail are proud to be the

sole supplier. Since 2005, we have installed and commissioned over 2500 Signets on major UK rail projects, supported by an extensive range of Service Level Agreements, thereby ensuring Signet performs to predefined targets.

Establishing this partnership and following the success of Signet, Camlin Rail have since had the opportunity to install the innovative pantograph monitoring system, PanVue, to facilitate early detection of damaged pantographs.

Camlin Rail's monitoring solutions have been critical in protecting networks and maximising availability for Network Rail, and for various partners across the globe.



“ On the West Coast Main line, Signet replaced the traditional LV power supply fuse protection systems to provide coordination and basic sectionalisation which was proving to be expensive and labour intensive and often resulted in long train delays and lost minutes. Signet solves this problem in a cost effective and controllable manner by automatically restoring power to affected signals and reconfiguring the system to isolate the fault.

— Network Rail – West Coast

Signet: West Coast Main line

THE SPECIFICS:

- The West Coast Route Modernisation (WCRM) project began in 1998 to modernise the railway, increase capacity and reduce journey times.
- Linking London with Glasgow, Birmingham, Liverpool, and Manchester, the WCML is a key strategic railway line in the UK with key hubs for commuting passengers.
- Aligned with Network Rail's Digital Railway strategy to ensure safety of staff and enhancing availability, Camlin Rail have installed over 1000 Signets to isolate faults automatically to reduce downtime.





Signet: Elizabeth line



THE SPECIFICS:

- The Elizabeth line is a prestigious route with a high frequency of passengers, requiring fault detection to ensure reliability.
- Camlin Rail have installed over 500 Signets within two sections of the main line route between Paddington and Maidenhead and Stratford to Shenfield.
- As a major infrastructure project and one of the most complex digital railways in the world, Signet was installed to protect networks and enhance availability to keep passengers moving.

“

At Camlin we work to optimise the critical infrastructures all around us, and this is a perfect example of how we are supporting our customers to improve the safety, reliability, and efficiency of tomorrow's transportation networks

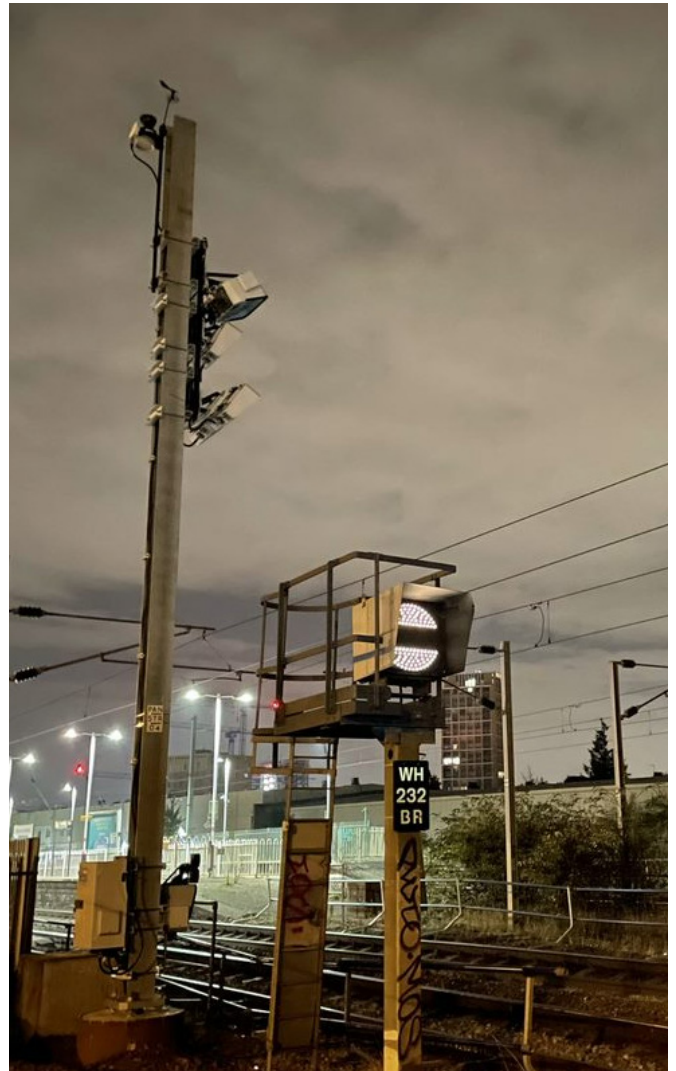
— Peter Cunningham, Camlin CEO

PanVue: Midland Main Line

THE SPECIFICS:

- Consisting of 4 track location, both monitoring sites protect the Midland Main Line which services the Midlands to London St Pancras International - a key arterial route, connecting trains to Europe via the Eurostar.
- Ampthill consists of 4 PanVue, Overhead Mounting Frame (OMF).
- Hendon consists of 2 PanVue, Wayside systems.

Camlin Rail are redefining pantograph monitoring with PanVue, with the objective of facilitating early detection of damaged pantographs. For Network Rail, this detection before they enter the city of London enables early intervention of a pantograph event. This protects their networks and maximise fleet availability, by allowing the route asset manager to remove a train from service that would otherwise potentially cause a delay.





PanVue: Western Main Line

THE SPECIFICS:

- The Western Main Line connects the city of London to Cardiff – a key arterial route linking Wales to the city of London.
- 10 PanVue OMFs installed at four monitoring sites: Bristol Parkway, Didcot, Southcote and Westbourne Park.
- With significant passenger numbers and high frequencies of service, Camlin Rail's pantograph monitoring solution maximises availability, keeping trains moving.

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Camlin Rail's pantograph monitoring solution, PanVue, was the best choice for us. They have been very accommodating to work with and very flexible to meet Network Rail's specific needs. Given an impact of dewirement can be up to £1 million, we are very pleased with the installation and the consequent cost savings achieved.

— **Elena Ionescu - Asset Engineer: Electrification, Route Asset Management Team, Network Rail**

Summary

"It's been a pleasure to partner with one of the most established companies in the industry, Network Rail, to provide two of our innovation solutions – Signet and PanVue. As innovators, it is our responsibility to provide our partners with the most effective solutions that will truly impact their business. I am very fortunate to lead a great team and I am excited to grow our business, develop our partnerships and continue to push the boundaries of technology. At Camlin, we pride ourselves in delivering authentic value for our customers and I look forward to a successful journey ahead."

— Paul Fleming, Managing Director

Camlin Rail's PanVue provides a regular health check of in-service pantographs, using high-resolution imaging to identify damage, missing components, and misalignment. If anomalies are detected, alerts are sent via email and/or SMS to maintenance staff and detailed visualisation, accessed via a web portal, allowing engineers to examine parameters such as section views of the pantograph, analysis of pitch and roll angles, and provide an informed response to the defect preventing a potentially service disrupting incident. This identification of incidents is cost-effective by allowing operators to withdraw faulty vehicles from service, protecting their overall infrastructure.

Camlin Rail's Signet allows rail operators to maintain supply continuity during extreme fault conditions. In the event of PSP supply failure, cable fault, or if a section of the power cable is stolen, Signet first switches the circuit open in order to protect the power system. It then rapidly reconfigures the network in order to isolate the faulted or missing section and ensure continuity of supply. Once the fault has been repaired or the missing cable replaced, Signet allows power to be restored the network, and returns the network to its original configuration.

Camlin Rail are delighted to continue the collaboration with Network Rail and look forward to working alongside our partner to provide solutions that enable the best impact and continued results.

Signet is the sole solution for Network Rail in the UK and PanVue is currently deployed globally by train operators including Heathrow Express (UK), Network Rail (UK), MTR (Hong Kong), Deutsche Bahn (Germany) and RFI (Italy), SEPTA, Stadler Rail USA, Caltrain (US).

To find out more about Camlin Rail and how we are protecting networks and maximising availability, get in touch with the team or visit camlinrail.com today to take the journey further.



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Camlin Rail

Head Office
31 Ferguson Drive
Knockmore Hill Industrial Park
Lisburn BT28 2EX
Northern Ireland

Chicago
1765 North Elston Avenue
Unit 105, Chicago, IL 60642

Tel: +44 (0)28 9262 6989
Email: mail@camlinrail.com
Web: camlingroup.com