



INNOVATION EDGE™: RAIL SAFETY SYSTEMS MAGNETIC BARRIER

Main Image: RSS Magnetic Barrier with blue handrails, in use on the Ladbrook Lane project, Wiltshire

Murphy has utilised this easy to erect and cost-effective system developed by Rail Safety Systems to provide a safe working environment close to live railway lines.

Description

The innovative Rail Safety Systems Magnetic Barrier is a patented safety barrier system that provides temporary protection for operatives when working close to the railway line.

The system has been developed by Rail Safety Systems in the Netherlands and consists of three main components – stanchion, hand rail and kicker rail. It meets the safety requirements of the European standard EN 13374 Class A.

The galvanised steel stanchion connects to the web of the running rails via a magnet, which is powerful enough to resist tensile forces of up to 600kg.

The distance between the stanchion and the rail can be adjusted within the minimum safety distance of 1.95m and 2.55m. The stanchions are spaced along the track at approximately 3m intervals.

A simple, interlocking system attaches the Glass Reinforced Plastic handrails and kickers to the stanchions. The handrails and kickers also have simple connectors.

All components combine together to provide a simple, quick and effective barrier between trackside working parties and live rail traffic.

The Benefits

- Eliminates the requirement to remove and replace ballast, relative to more traditional barrier installation, resulting in no hazardous ballast dust being inhaled by the workforce.
- Facilitates a safer and tidier working area, due to its simple design which does not require tools to install.
- Reduces the danger of damaging underground signalling cables and other services, due to being a 'no dig' solution.
- Enables application in both cold weather (as low as 20°C) and hot weather (up to 80°C) due to eliminating the requirement for ballast removal.
- Decreases duration of possession time and costs due to its ultra-fast build time compared to traditional demarcation methods, coupled with easy dismantling.

Application

Murphy utilised the Rail Safety Systems Magnetic Barrier on the Ladbroke Lane project in Wiltshire. The circa £1m project involved the demolition and reconstruction of a bridge as part of the Great Western Electrification Programme (GWEF).

The barrier provided extremely effective protection and enabled work in close proximity to the track to be completed 75% faster compared to traditional barrier system.

For the 90m section of track that required demarcation, the Rail Safety Systems Magnetic Barrier produced a direct cost saving of c£1,500 in comparison with a traditional safety barrier system.

End User Feedback

The Rail Safety Systems Magnetic Barrier has been approved for use in the UK, Germany and the Netherlands by respectively Network Rail, Deutsche Bahn, and Pro Rail.

A winner of the Rail Tech Europe Award for Innovation, the Rail Safety Systems Magnetic Barrier has also been recognised as Best Product Contributing to Health and Safety and Best Track and Infrastructure Maintenance Product at the 2013 Railtex Awards.



Section of track on Ladbroke Lane

Market Potential

The Rail Safety Systems Magnetic Barrier has been specially designed for the rail industry. There may be other applications when working close to other restricted areas.

Learn More

For more information, please contact Murphy Marketing & Communications Department at communications@murphygroup.co.uk

This is a brief description of the solution as we have applied it and should not be taken as exact. Its application must take into account the local environment and specific project requirements.

