

Rail Maintenance Depot with DC Immune RCD Protection

When a new train line is opened or there is an upgrade to an existing line, new repair and maintenance facilities may also need to be provided or existing facilities updated. The facilities can be comparatively limited, to enable cleaning and rudimentary repairs to be carried out or they can involve a much higher level of investment to enable significant repairs and planned maintenance to be undertaken, to minimise disruption to services.

In recent years, the Blakley team has been involved in a number of Rail Maintenance Depot projects enabling Underground, Overground and High Speed Trains to be maintained to the highest standards. Most recently we have been involved in a major project to provide completely new depot facilities at Three Bridges in West Sussex. This state of the art facility is fully equipped to carry out major and minor repairs to trains being used on the Thameslink service, which links Brighton to Bedford via Central London. In addition to all the usual challenges that arise from upgrading lines in heavily built-up areas, one of the unusual challenges facing the Thameslink team is that the trains have to be capable of being powered from overhead lines in northern sections and from the Third Rail in southern sections. This means that the depot has to have facilities to be able to deal with an exceptionally wide range of repairs. The existing dual voltage trains have been in service since the line opened in 1988 and new trains are due to come into service between 2015 and 2018. As you can see from the images, the new facility is very well equipped to help keep this busy line running.

The equipment supplied to the new depot consists of bespoke Power Clusters, Transformer Assemblies fitted with sockets, 400V TP&N MCB Boards and TDC series combined transformers and distribution boards, which provide Reduced Low Voltage 110V power to remote sockets. Due to the presence of DC current from the Third Rail traction system, all RCDs installed within 30 metres of the running rail, whether within MCB distribution boards, Transformers or Power Clusters, must meet Network Rail DC Immunity requirements. Blakley Electrics have manufactured DC Immune RCDs for many years and have now developed a specialist range of MCB boards, which have the option of individual DC Immune RCD protection for each outgoing way. These have been widely utilised at Three Bridges as a cost effective and efficient way of meeting Network Rail requirements.

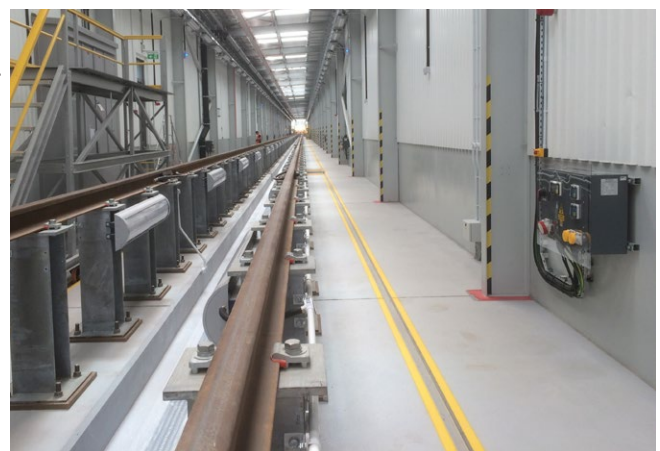
Please see over the page for more images of this new facility.



MCB Board (A7183237) and 10 kVA Transformer Distribution Cubicle (A7034241) both with DC Immune RCDs



Power Cluster Assembly (A7291705) with DC Immune RCDs



Power Cluster (A7291705) installed in every third bay



GRP Transformer Assembly, 3.5 kVA, IP66 (A7034212)



MCB Board (A7183240) and 10 kVA Transformer Distribution Cubicle (A7034163) both with DC Immune RCDs



Steel Transformer Assembly, 2 kVA, IP66 (A7050733)



MCB Board (A7183242) and 10 kVA Transformer Distribution Cubicle (A7034165) both with DC Immune RCDs



Waiting for a train!