

CASE STUDY

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Contract Details

Client:

Network Rail

Location:

Maidenhead to Bristol Parkway.
Reading to Newbury. Wootton Bassett to Chippenham.

Principle Works:

The project works to date has involved electrifying the Great Western Mainline from Maidenhead to Bristol Parkway. Reading to Newbury. Wootton Bassett to Chippenham with the authorisation of passenger trains to Newbury and Bristol Parkway. This has been achieved with the installation of 1000 miles plus of wire and 9,500 foundations and 21 new 25kV HV substations.

Testing of RATS (Rationalised Auto Transformer System).

HV Soak Testing and Section Proving of all HV Substation sites.

Section proving of 1000 kilometres on new electrified OLE infrastructure and some 450 Overhead line manual and motorised switches.

Short Circuit testing with VL and VT monitoring.

Incoming Feeder commissioning with National Grid.

Dynamic testing of the Overhead Line system using instrumented pantograph test trains.

EMC testing of the system to prove train / system compatibility.



On a scale not seen for decades, the modernisation of the Great Western Route, the programme is a huge project with the aim to electrify the line and culminate in the running of electric passenger trains along the entirety of the route.

To date, there have been 1,000km of new overhead wires installed along the route to allow electrified train carriages to run, as well as almost 10,000 foundations and the addition of 21 new substations operating at 25kV.

The commissioning team here at WJ Project Services was tasked with the undertaking of entering two new infeed substations and new 25kV substations to feed the newly installed

overhead line system. The rigorous testing and commissioning of all HV infrastructure needed for the transformation of the line section to an electrified infrastructure was delivered by our team at WJ Project Services successfully.

Testing of the overhead line equipment included standard section proving, short circuit testing and dynamic testing, with further challenging testing required for the newly integrated RATS protection scheme, an innovative protection system designed to reduce downtime when faults are detected. The team successfully commissioned the new system by performing a series of testing on the system, as well as control room interface and integration planning.

The large-scale testing programme was completed successfully, leading to the running of Class 387 / IEP passenger trains in January 2019 between Bristol Parkway, Newbury and Reading to Maidenhead.

For more information about the project, or to find out more about what WJ Project Services can do for your ongoing or upcoming briefs, get in touch with a member of our expert engineer team today.