



Southern DC Traction Power Supply Enhancement

Project

Southern Direct Current Traction Power Supply Enhancement

Client

UK Department for Transport

Location

London, UK

Start Date

2008

End Date

2016

Duration

100 months

Contract Value

Circa £200m

Services Provided

Electrification & power supply, systems integration, programme management management

Background

The existing traction power system in Wessex, Sussex and Kent had an operating capacity limited to the train service which currently operates on it; generally it was originally built for eight car trains.

In order to provide additional capacity and more frequent trains, train services, improvements to the power supply were required.

This project has enabled an improved, higher capacity timetable to be implemented.



Scope of Works

The capability of the existing traction power system was reviewed against the proposed timetable and rolling stock changes. This project involved changes to:

- ▶ supply grid and high voltage feeder system
- ▶ direct current (DC) substation system
- ▶ electric track equipment.

All scope was successfully installed on the operational railway without unplanned delay.

Key Project Outputs

The traction power system was enhanced in Wessex, Sussex and Kent to support the Control Period 4 (CP4) train lengthening by the passenger Train Operating Companies (TOCs), South West Trains, Southern and Southeastern in support of the Department for Transport's High Level Output Statement (HLOS).

The key outputs of this project include:

- ▶ in Wessex – to support 10 car train lengthening on selected suburban routes

- ▶ in Sussex – to support 10 and 12 car Class 377 train lengthening is on selected routes
- ▶ in Kent – to support 12 car Class 465 train lengthening on the metro routes to Dartford via Greenwich, Bexleyheath & Sidcup; on the route from Gravesend to Dartford; on the route to Hayes and on the Kent Main Line to Sevenoaks in CP4 and CP5.