

Case Study

AN **idom** GROUP COMPANY

Project

Sussex7DR Hookswitches

Date

December 2013 – March 2016

Client

Network Rail (Engineering Support for Colas Rail)

Overview

Idom Merebrook acted as engineering consultant to Colas Rail to provide civils design for the upgrade of isolation systems of eleven sites located on the Sussex Route (Balham to Brighton), one of the main commuter routes in the south of England, carrying approx 51,000 people in each morning peak into the Central London employment zone.

Services Provided

Civil Engineering design, foundation design, production of F001, F002, F003, AFC and As-Built drawings

Description of Project

The Seven Day Railway Project is intended to deliver improvements to network availability by both improving the efficiency of gaining track access for both routine and emergency works, and to minimise the impact on railway services during the set up and hand back process.

This objective was to be achieved by replacing existing conductor rail hook switches with Controlled Track Switches (CTS). Due to the requirements of track isolation for each site, access restrictions (existing services and rail isolation limitations) and Network Rail standards, major civils design for the provision of CTS base foundations, cable troughing / ducting routes, ground retaining measures and site access was required for each of the eleven sites.

Following Network Rail protocol, the first stage of the civils design was to prepare a combined F001 (Approval In Principle) document for all sites which detailed: the scope of civil works for the individual sites; existing assets affected by the proposed works; detailed design criteria to be followed according to relevant Network Rail standards; geotechnical considerations and preliminary design drawings. Once approval for the F001 from Network Rail was granted, work began on providing individual F002 (Statement of Design Intent) documents for each site. These were then followed by F003 and AFC (Approved for Construction) documents for each site which provided the Client with detailed design specifications from which construction could be undertaken. These documents included: quantities of materials; detailed staging of construction work and Designer Risk Assessments, as well as detailed design drawings of each site layout, CTS base slab foundation reinforcement details and schedules and cross-reference to applicable NR drawings and standards.



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