



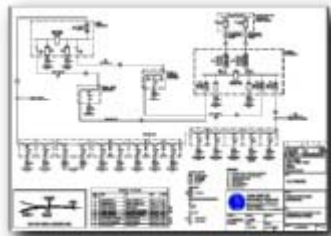
## Case Study - Crewe Railway Station and Sidings 6.6kV Distribution System – Condition Survey

Crewe Station is perhaps the most famous railway junction in Britain. As part of the West Coast Main Line it is the change over point for Liverpool, Manchester, Chester, North Wales, The Potteries, Shrewsbury, South and Central Wales. It is located off Junction 16 of the M6 Motorway in Cheshire.

Jones-Jack Ltd. were approached by Network Rail PLC to provide an Asset Information and Condition Survey Report of the Crewe 6.6kV Domestic Power Supply Distribution System. The survey was necessary to determine any future work to be carried out on the ring. The maintenance contractor had very little information regarding the route or distribution arrangements in the Crewe area. As part of the survey a full schematic and layout plan was provided to indicate findings.



The survey provided Railtrack with the following information:



- Drawings showing existing cable routes
- Drawings showing JJJ recommended revised cable routes
- An electrical schematic showing all 6.6kV assets e.g. cable sizes, circuit breakers, fuses etc
- Comprehensive list of consumers or assets fed from the ring
- Details of existing metering arrangements
- Condition assessment of each section of 6.6kV cabling
- Condition assessment of substation buildings, switchgear, transformers, lighting tower circuits and tower enclosures
- List of any redundant assets that could be removed
- Load measurements (taken at key points on the ring over a defined 48 hour period)

The survey was successfully completed by Jones-Jack Ltd. PTS qualified Engineers under COSS guidance. CAD drawings and design documentation was completed using our “in house” technical staff. As part of the survey works, liaison with a building contractor completing an unassociated project in the area was implemented. This led indirectly to the replacement of a section of 6.6kV cabling and provision of cable troughing to the satisfaction of both Network Rail and the building contractor. All work undertaken was completed within the Network Rail allocated timescales.



Client: Network Rail PLC

Contractor: N/A

Programme: 12 weeks