

NAME OF PERSON Paul McSharry



NATIONALITY British

HOME LOCATION Wellingborough, Northamptonshire

POSITION Principal Engineer, Professional Head of Signalling & Telecoms and Managing Director

QUALIFICATIONS & TRAINING

Incorporated Engineer (IEng) (1997)
Chartered Manager (CMgr) (2014)
Member of the Institution of Railway Signal Engineers (MIRSE) (2002)
Member of the Institution of Engineering & Technology (MIET) (1997)
Member of the Chartered Management Institute (MCMI) (2014)
Member of the Institute of Directors (MIoD) (2013)
Member of the Rail Supply Group (RSG) SME Council (2017)
Member of the Rail Industry Association (RIA) SME Group (2017)
IRSE Mentor under the IRSE Mentoring Scheme (2016)
IRSE Assessor / Professional Review Interviewer for CEng/IEng (2016)
Working towards IRSE Senior Engineering Manager (Design) Licence (7.8.230E)
Role of the Director & the Board (IoD – 2017)
Leadership Development Skills (2015)
Railway Communications (2008)
Link Up Proof Licensed Auditor trained (2003 & 2006)
Signal Assessment Tool (SAT) – now SORAT – Trained (2003 & 2014)
Detailed Assessment (DA) Workshop Facilitator Trained (2003)
Engineering Safety Management – Engineer's Overview trained (2000)
WESTRACE Ladder Logic Appreciation trained (1998)
IECC Appreciation trained (1997)
BSI Trained Internal Quality Auditor (1996)
Reliability Centred Maintenance trained (1996)
Project Safety Management Systems trained (1995)
HNC (Electrical and Electronic Engineering) (1985)
ONC (Electrical and Electronic Engineering) (1983)

KEY EXPERIENCE

A professional railway signalling and systems engineer with 36 years experience, having effective project management, design management, project engineering and communication skills. He is experienced in system specification, design and application of both modern and traditional signalling systems as part of both renewal & development projects. He has extensive experience of undertaking Design Manager, CRE and RDE roles on signalling infrastructure projects.

Paul has experience of electromagnetic compatibility, immunisation and system compatibility issues, implementation of safety critical processor based systems, safety assessments as well as safety and product approval processes. He also has experience of track renewal and track replacement projects and has developed key skills in the area of multi-disciplinary co-ordination and co-operation.

EXPERIENCE

July 2000 to date Managing Director, Kilborn Consulting Limited

September 1997 to June 2000 Director, Naseby Signalling Associates Limited

Work undertaken during this period: (1) Feasibility Studies and Infrastructure Works:

In the role of Signalling CRE, RDE & Design Manager, currently leading the design development of the GRIP Stage 3 outline design of the signalling infrastructure works associated with the infrastructure enhancement works at Norwich Crown Point Depot. These are being carried out to support Abellio's franchise commitment to introduce new rolling stock to routes in East Anglia (2017).

In the role of Signalling CRE, RDE & Design Manager, currently leading the development of the GRIP Stage 1 – 2 feasibility design of the signalling and telecoms infrastructure works associated with Feltham Train Care & Servicing Depot (2017).

In the role of Signalling CRE, RDE & Design Manager, currently leading the design work associated with the conversion of 9 No. TSRs to PSRs in the Anglia route (2017).

In the role of Signalling RDE & Design Manager, currently leading the design development of the GRIP Stage 1 – 4 outline design of the signalling and telecoms infrastructure works associated with the Trans Pennine Express Train Care Depot at Scarborough (2016 – 2017)

In the role of Signalling CRE, led the signal sighting assessment associated with the platform alteration works being implemented at Burnham Station. The work involved the development of a desktop based Signal Sighting Report to assess the potential impact of the proposed works on the existing signalling infrastructure (2016 – 17).

In the role of Signalling CRE, led the signal sighting assessment associated with the proposed DDA Footbridge being constructed at Aylesbury Station. The work involved the development of a desktop based Signal Sighting Report to assess the potential impact of the proposed footbridge on the existing signalling infrastructure (2016).

In the role of Signalling CRE, RDE & Design Manager, led the design development of the GRIP Stage 5 signaling detailed design for the extension of Bath Spa Station to accommodate 10-Car IEP Stock and future electrification. This project has particular challenges regarding cable routing to support blockade works (2016 – 17).

Led the Production of Level Crossing Risk Assessment Reports on the Tyne & Wear Metro associated with potential future increased use of the crossings due to proposed nearby housing. The assessment considered the suitability of the AOCL crossings installed and whether the form of crossing and associated protection arrangements were suitable and sufficient. As an assessment from this work, it was recommended that Nexus should upgrade the crossings from AOCL to AOCL+B regardless of any housing development (2016).

In the role of Signalling CRE, led the signal sighting assessment associated with the proposed DDA Footbridge being constructed at Aylesbury Station. The work involved the development of a desktop based Signal Sighting Report to assess the potential impact of the proposed footbridge on the existing signalling infrastructure (2016).

In the role of Signalling CRE, RDE & Design Manager, currently leading the design development of the GRIP Stage 3 – 4 outline design of the signalling infrastructure works associated with the expansion of the DIRFT III Intermodal facility. The work includes development of design to AiP stage for both the DIRFT III railway and the adjacent Network Rail infrastructure, with the latter including leading the Asset Protection Agreement processes with Network Rail (2016 – present).

In the role of Signalling RDE & Design Manager, currently leading the design development of the GRIP Stage 3 outline design of the signalling infrastructure works associated with the redevelopment of St Erth Station (2016 – present).

Led the production of a number of Signal Sighting reports, assessing the implications of the installation of Overhead Line infrastructure at a number of stations in the Bath Spa area. These assessments involved working closely with OLE, Civil and M&E Engineers to ensure the Sighting design was robust and reflective of the site risks (2016).

In the role of Signalling RDE & Design Manager, led the design development of the GRIP Stage 3 outline design of the signalling infrastructure associated with the construction of the new Exeter Olds View Depot (2016 – 17).

Seconded to the role of Signalling Project Engineer for Network Rail providing technical review and guidance to the contractor's design team for the SOLUM Project at Twickenham Station. This has included provision of technical and process direction, critical review of detailed signalling design submissions, completion of DRNs, support to MSRP process, all whilst ensuring design compliance to relevant standards (2015 – 2017).

Led the development of a comprehensive feasibility design study for a major Midlands Intermodal Depot, DIRFT III, which is being substantially extended from its current layout. Equivalent to the GRIP Stage 1 – 2 Study. The works associated with this project involves very close development with other disciplinary colleagues to determine the optimal track and signalling layout for the operational requirements of the clients. Detailed analysis of the impact upon the cross boundary interface with Network Rail was also required, including minimising the works arising. The project also required investigation and justification of different technical solutions including the implication this will have on available budgets (2015/2016).

In the role of Signalling CRE, RDE & Design Manager, led the development of the GRIP Stage 3 and subsequently GRIP Stage 4 outline design of the Network Rail signalling infrastructure works associated with the construction of the new Hitachi IEP Depot at Doncaster (2015/2016).

In the role of Signalling CRE, RDE & Design Manager, led the development of the GRIP Stage 5 Detailed Design of the signalling works associated with a proposed new station at Marsh Barton near Exeter (2015 – 2017).

In the role of Signalling CRE, RDE & Design Manager, led the development of the GRIP Stage 3 outline design of the signalling works associated with bringing back into use of West Ealing Sidings as a stabling facility for FGW (2015/2016).

In the role of Signalling CRE, RDE & Design Manager, led the development of the GRIP Stage 3 outline design of the signalling works associated with a proposed new station at Brent Cross and development of a portion of the adjacent sidings at Cricklewood Depot (2015/2016).

In the role of Signalling CRE & RDE, led the GRIP Stage 3 outline design of the signalling works associated with stabling and capacity enhancements at the FGW Depots at Reading and Penzance (2015).

In the role of Signalling CRE, led the initial design investigation associated with the closure of two level crossings that are part of the Wessex Level Crossing Closure Programme; these are Farnborough North FP/UWC and Sheet AHB (2015).

In the role of Signalling CRE, led the signal sighting assessment associated with the proposed road overbridge being constructed over the Midland Mainline as part of the Bedford Western By Pass (Northern Section) Project. The work involves the development of a desktop based Signal Sighting Report to assess the potential impact of the proposed bridge on the existing signalling infrastructure (2014/2015).

Led the development of a Trap Point Risk Assessment that is required to support the Hinksey Area Flood Alleviation Scheme at Hinksey Junction, including facilitating the Risk Assessment Workshop (2014/2015).

Led the development of a Trap Point Risk Assessment that was required in relation to a set of trap points at Southampton as part of the Freight Train Lengthening Project (2014).

Led the Signalling Correlation and Condition Assessment work required to support the Chadwell Heath Area Enhancements associated with the Crossrail Anglia works. This included detailed on site correlation of a number of affected Location Cases, a Condition Assessment, correlation of the OLE Bonding Plan and associated reports and the production of Location Siting Forms for a number of new Location Cases (2014).

Led the signalling input to the EMC, Stray Current and Earthing & Bonding Study for Allerton Depot. The signalling input included extensive site surveys to determine and correlate the existing signalling and OLE bonding, and desk top studies of all signalling assets in the affected area (2014).

Led the development of a Feasibility Study at Ferrybridge Power Station relating to the proposed new Multifuel Plant at the site. The proposal includes for the provision of two new rail sidings connecting to a new junction on the power station railway. The work included all aspects of the feasibility of the proposal, leading to the production and submission of the report and a supporting Signalling Scheme Plan, together detailed cost estimates for the overall works through to completion and a risk assessment report relating to various aspects of the proposals (2014).

In the role of Signalling CRE, led the production of 11 Level Crossing Risk Assessments as a consequence of signal box closure and either an increase in rail traffic or increase in linespeed Huddersfield – Bradford Re-Control (2014).

Carried out the role of Design Manager, CRE and RDE for the GRIP 5 – 8 platform extensions project taking place at Bicester North and Haddenham and Thame Parkway Stations. The signalling works involved with these stations was tailored on the relocation of existing, and positioning of new, train stop markers and signal sighting of existing signals. The signal sighting exercise was carried out by our Signal Sighting Chair and our report concluded that signal sighting would not be impacted upon as a consequence of these works (2014).

Carried out the role of Design Manager, CRE and RDE for the GRIP 5 – 8 signalling bonding upgrade works on the Midland Mainline as part of the Thameslink Key Output 1 project (2013/2014).

Led the signalling equipment and wiring correlation works to support the GRIP Stage 5 signalling design work associated with the North South Wales Journey Time Improvement project. This covers Chester and Saltney Junction to Rossett and Gobowen to Shrewsbury Crewe Junction (2013/2014).

Carried out the role of Design Manager, CRE and RDE for the signalling design works associated with the extension of the Maintenance Shed at Beckton Depot on Docklands Light Railway (2013/2014). This covered the equivalent of GRIP Stages 3 – 8 inclusive.

Carried out the role of Design Manager, CRE and RDE for the signalling feasibility works associated with the provision of a new station at Belford (2013/2014).

Carried out the role of Design Manager, CRE and RDE for the signalling and Level Crossing Ground Plan works associated with the construction of a new Footbridge at North Sheen (2013/2014).

Carried out the Level 2 check of the SAT files and all supporting documentation for Purley Station. Provision of check comments and production of SORA SAT Report (2013).

Led the measurement correlation survey work in the West Brompton and Imperial Wharf Stations areas of the WLL for the design of the platform extension to progress. In parallel, Kilborn Consulting carried out signal overrun risk assessment work to support the GRIP Stage 4 design. This included preliminary risk assessment, SAT and DA activities as appropriate. As a result of the above, a Signalling Correlation & Condition Report, and SORA & SAT Reports were then produced for the Client (2013).

Led the production of a report assessing the proposed signalling scheme at Old Oak Common for a new depot layout to accommodate the new Cross Rail stock and the operational requirements. The report examined plans and suitability to allow entry and exit to the depot and detailed the changes necessary to the signalling to accommodate the depot. In conjunction with the report, a signalling scheme sketch was produced showing the proposed new layout (2013).

Carried out the role of Design Manager, CRE and RDE for the GRIP Stage 4 signalling design works being carried out to support the North South Wales Journey Time Improvement project (2012/2013).

Led the production of Signal Overrun Risk Assessment SAT Reports providing the results of the SAT exercises carried out in respect of proposed freight train lengthening running between Southampton & the West Midlands. The activities were carried out for Eastleigh, Dorwich, Wallers Ash, Fenny Compton and Milverton stations (2012 – 2013).

In the role of Design Manager, CRE and RDE, led the production of Feasibility Reports to outline the works required on the signalling infrastructure to facilitate the extension of the Brighton Slow Line platforms and complete closure of the Atlantic Lines at Battersea Park station. This was followed by production of the GRIP Stage 4 Outline Design to obtain AIP, including SSP, FPS, DL, Buffer Stop Risk Assessment and Testing Strategy. (2012 – 2013).

The production of an initial Signal Sighting Report to verify that proposed walkway lighting and associated posts at a number of depots would not interfere or reduce the existing sighting of signals or other signalling equipment (2012).

Led the production of an Option Selection Report following Network Rail's aspiration to create an additional platform at Leeds station to increase capacity by allowing trains to run through Leeds station and terminate at a new Leeds East Parkway station and turnback (2012).

Led the production of a Signal Overrun Risk Assessment SAT Report providing the results of the SAT exercise carried out in respect of the proposed journey time improvements on the Brighton Reversible line between Battersea Park and Victoria stations (2012).

In the role of Design Manager, CRE and RDE, led the production of a Site Survey and Correlation Report for the installation of a new Tail Lamp Camera at Truro Signal Box. Further to this a Detailed design was produced, which was implemented on site, followed by the creating of as-builts and final return of records to NRG (2012).

Led the production of a SORA Report and an associated SAT exercise carried out in respect of proposed capacity enhancements at Hereford station in the form of providing turnback facilities for Platforms 1 and 2 (2012).

Carried out the role of CRE for GRIP Stage 3 feasibility projects relating to the provision of greater platform capacity at Redhill, Norwood Junction, West Croydon and Purley Stations (2011-2013).

Led the gathering and capture of asset data and production of Feasibility Reports for the Transpennine Electrification project, highlighting the immunisation requirements relating to signalling and telecommunications equipment to provide compatibility for the electrification of the route between Manchester Victoria and Leeds & Selby (2011/2012).

Carried out the role of CRE for the GRIP Stage 3 feasibility project relating to the re-instatement of Bi-Directional signalling on and in the area of Ely West Curve (2011/2012).

Carried out the role of Design Manager, CRE and RDE for the signalling works being carried out to support Anglia Power Supply Upgrades at Hill House and Hythe (2011).

Led the production of SAT/SORA Detailed Assessments (incl. DA Workshop) relating to proposed speed enhancements at Crofton Road Junction including lowering of line speed on the Down Atlantic Line (2011).

Led a series of extensive measurement correlation surveys and the production of associated correlation reports ahead of the proposed infrastructure changes required as part of the Thameslink Programme Key Output 2 (2011).

Carried out the role of Design Manager and RDE, managing the production of the detailed designs for the upgrade of an AOCL Level Crossing to ABCL status at Ferrybridge Power Station. The work is being carried out in accordance with all relevant Network Rail standards (2010/2011).

Carried out the role of Signalling CRE for the signal sighting activities associated with the redevelopment of Witham (2010).

Led the S&T engineering input to the extension of platforms at Wellingborough & Kettering stations. The work was required to identify the impact and issues arising from the extension of platforms to enable 10 car trains to be accommodated. Extensive infrastructure survey and measurement work was carried out and the findings were documented in an appropriate Feasibility Report (2010).

Provided the S&T engineering input to GRIP Stage 2 Fast Track Enhancement Projects relating to the double tracking of the Soham Branch in the Anglia area, the Braintree Branch Capacity Improvements in the Anglia area, capacity improvements at Queenstown Road and Exeter to Worting Junction Linespeed Improvements. The work included design development of the S&T works required to accommodate the proposals, development of Bills of Quantities and support to the estimating process, production of signal engineering requirements documentation together with associated Signalling Sketches and input to final Option Selection Reports. Attended, and provided input to, Opening and VM/QRA meetings, as well as site surveys (2010/2011).

Led an S&T Condition survey exercise at Melton Mowbray station to assist with the development of the designs for improvement works. The survey was required to identify the condition, type, slack, amount of cables, etc., of existing S&T equipment and cables that were present at the site. The findings were presented in a suitable report (2010).

Carried out Signalling Maintenance Management Systems auditing on Docklands Light Railway, specifically upon the infrastructure Maintainer, Serco Docklands, covering all levels of the organisation from senior management through to area signal maintenance engineers. Sample audits of equipment were undertaken across the system and condition assessments were carried out to validate data held by the infrastructure controller. A comprehensive series of audit reports and recommendations were produced (2010).

Provided the S&T engineering input to GRIP Stage 1 to 3 Fast Track Enhancement Project for Willington C Power Station. The scheme necessitated the development of proposals for the provision of Oil Discharge Sidings and a connection to Network Rail infrastructure near Stenson Junction. The work included development of the S&T works required to accommodate the proposals, development of Bills of Quantities and support to the estimating process, input to the GRIP Stage 3 Option Selection Report together with associated Signalling Sketches. Attended, and provided input to, Opening and VM/QRA meetings, as well as site surveys (2009).

Provided/led the S&T engineering input to GRIP Stage 1 to 3 Fast Track Enhancement Projects being developed in the Anglia and Wessex areas. These schemes have included proposals for the following works: new station at Beam Park on the LT&S Railway; new British Gypsum sidings at Purfleet; Platform Extensions at Stansted Airport; new/extended platforms at Roydon Station; additional train stabling at Cambridge sidings; 10 Car Platform Extensions at 36 No. stations in the Wessex area. The work has included development of the S&T works required to accommodate the proposals, development of Bills of Quantities and support to the estimating process, production of GRIP Stage 3 OPS documents together with associated Signalling Sketches and input to final Option Selection Reports. Attended, and provided input to, Opening and VM/QRA meetings, as well as site surveys (2009 – 2011).

Led the Signalling and Telecoms input to proposed platform extensions on the Kings Lynn branch line, which involved the stations at Waterbeach, Littleport and Watlington. The role encompassed GRIP 3 Stage design work and involved extensive site surveys and the production of detailed reports (2009).

Led a feasibility study into the removal of the Miniature Warning Light (or 'Barrow') crossing at Downham Market Station. A number of 'near misses' had occurred at the crossing despite improved signage and new CCTV at the station and so removal of the crossing was proposed by Network Rail. The role in the project was to advise the client on any impact that removing the crossing would have on the signalling infrastructure (2009).

Acted as Design Manager and RDE for the resignalling of Ferrybridge Power Station railway for which Kilborn Consulting Limited developed the detailed designs for the new signalling system, which was installed tested and commissioned over two phases in August 2008 and December 2009.

Kilborn Consulting were requested by the Network Rail national E&P team to consider and identify the track circuit immunisation requirements and to produce a scope of work for the signalling immunisation works on the Midland Main Line (MML) and Great Western routes to enable the Network Rail to make some assessment of quantity and complexity of work. Paul led the analysis work and the production of the output reports (2008/2009).

Led the GRIP Stage 4 Telecoms feasibility work and the intrusive survey work associated with the Wessex Package A and Package E Platform Extension multi disciplinary feasibility projects on Network Rail Infrastructure, affecting a total of 19 stations. This includes production of a GRIP 4 Telecoms Approval In Principle Reports for both the Operational Telecoms and Station Security and Information Systems (2008/2009).

Provided/led the Signal & Telecomms engineering design development input for the following multi disciplinary feasibility projects on Network Rail Infrastructure:

- The GRIP 4 studies for Axminster Area Capacity Enhancements; acted as CRE (2008/2009).
- The GRIP 2 and 3 studies for Wakefield Westgate Station Redevelopment; acted as CRE (2008).

The work included preparation of reports on signalling asset condition, signalling equipment and wiring correlation, outline project specification, Operational Telecoms and Station Security and Information Systems, preparation of signalling scheme plans, recommendations for signalling controls and inputs into reviews covering the design and construction of the works.

Led the data gathering and capture to assist Network Rail with an important nationwide project to identify signal interlocking boundaries. This project involved detailed information gathering from sources such as the Network Rail Records Centres and the Territory Signal Engineers. The nature of the work required a close working relationship with Network Rail at every stage. The information was used as a source for the mapping of a data layer on the company's Corporate Network Model (2008/2009).

Led the signalling and telecommunications engineering consultancy support to Prologis UK Limited for the development of a rail link and connection from the Kettering & Manton line on Network Rail infrastructure to the proposed Eurohub main intermodal freight handling facility in Corby, Northamptonshire (2008/2009).

Numerous inspections to identify Signalling and Telecomms assets and infrastructure as part of bridge repair or replacement works during the period 2005 to 2009.

Participated in the EMC assessment work for the East London Railway upgrade project, including hazard identification and hazard assessment which was carried out according to the EMC Management Plan and Network Rail "Yellow Book" guidelines (2008/2009).

Led a multi-discipline review of current maintenance practices for the North London Railway Infrastructure Project due to the increase in passenger train services operating on the affected routes and the growing demand for transporting freight along the North London Line core route. Our final reports covered a range of issues, including the use of new technologies and advised on new robust maintenance regime and access (2008).

Provided/led the Signal Engineering design development input into the GRIP 4 studies for the multi disciplinary Tunbridge Wells 12 car turn-back siding feasibility project, in the role of CRE. The work includes preparation of reports on signalling asset condition, signalling equipment and wiring correlation, outline project specification, operational telecommunications, preparation of signalling scheme plans, recommendations for signalling controls and inputs into reviews covering the design and construction of the works (2008).

East Midlands Parkway Station: Provided/led the Signal Engineering design development input in the role of CRE into the GRIP4 studies for the development of a new station at East Midlands Parkway on the Midland Mainline, a multi disciplinary feasibility project. The work included preparation of reports on signalling asset condition, signalling equipment and wiring correlation, outline project specification, operational telecommunications, preparation of signalling scheme plans, recommendations for signalling controls and inputs into reviews covering the design and construction of the works (2007).

Engaged by the RAIB to provide specialist support and expertise in the investigation of incidents and accidents on UK railway infrastructure. Recently assisted in the investigation into the derailment of a freight train in Maltby, South Yorkshire. Remit included the production of method statements, providing a tester to carry out the investigation, liaison with the RAIB and production of final report to the satisfaction of the RAIB (2006).

Hull Docks Branch Line GRIP 3 & GRIP 4 Studies: As part of a multi disciplinary feasibility project, provided/led the signal engineering design development input as CRE into the GRIP 3 and GRIP4 studies for upgrading the Hull Docks Branch Line from handling currently 10 trains each way per day to handling 24 trains each way per day. The work included preparation of reports on signalling options, signalling asset condition, signalling equipment and wiring correlation, preparation of signalling scheme plans, recommendations for signalling controls and inputs into reviews covering the design, construction and ongoing maintenance of the upgraded line, as well as consideration of operational telecommunications (2007).

Orpington Station: Assisted in the production of the Signal Sighting Issues Report in support of the AIP phase of the project under the DfT Step Free Programme for the provision of a passenger footbridge with lifts at Orpington Station to provide disabled access between the station platforms (2007).

GRIP 2 Feasibility Studies: St Helens and St. Albans Stations: Provided signalling consultancy support to White Young Green, supporting the Client's multi-disciplinary team, and carried out detailed assessments as part of the GRIP 2 feasibility studies of the impact upon the infrastructure arising from the proposed station re-development works at St Helens and St. Albans Stations. As well as signalling related issues, the work included consideration of operational, retail and business telecommunications (2007).

W10 Gauging Assessments (GRIP 3 & GRIP 4): Working in support of White Young Green as part of a multidisciplinary team, Paul carried out detailed assessments of the impact upon the infrastructure arising from the proposed introduction of W10 Gauge freight trains on two specific infrastructure routes (2005).

Feasibility Studies - Fitment of AWS: Completed the production of Feasibility Reports relating to the fitment of AWS equipment on a number of freight only branch lines on the Anglia area of Railtrack Eastern Region arising from the publication of the new RGS GE/RT8035 (2003).

Overrun Risk Assessments: Led the production of Overrun Risk Assessments for a large number of signals in the Network Rail Anglia Region (2003).

Work undertaken during this period: (2) Infrastructure Condition Assessments:

Level Crossing Condition Assessment Surveys (SICA): Currently in the role of Project Manager and lead Project Engineer, leading a team of 8 staff in an assignment to carry out Signalling Infrastructure Condition Assessments (SICA) at approximately 700 level crossings in South East and London North West Territories. Working with Network Rail HQ and Territory based Signal Engineers, this was a significant project aimed at providing Network Rail with data for the development of infrastructure renewal plans over the next 10 years. The production of output reports including recommendations for each crossing is a key part of the assignment.

Primary Signalling Infrastructure Condition Assessments: Carried out SICA surveys at approximately 90 signal box and relay room installations in South East Territory with production of appropriate survey reports. Full survey of the Railtrack East Anglia Zone's signalling assets in 2000 using the Primary Signalling Infrastructure Condition Assessment (SICA) software model. This comprised a survey of over 230 signalling installations with production of appropriate survey reports.

Work undertaken during this period: (3) Documentation and Standards:

Signalling Maintenance Documentation: Cromer-Norwich Line: Led the production of a suite of new and revised Signalling Maintenance Documentation for the Harmon VHLC Interlocking and HXP3 Level Crossing Predictor, a novel signalling system implemented by RT East Anglia Zone. These were later revised and reissued when the VHLC and HXP3 equipment was installed for controlling the Bedford-Bletchley Line.

Supply Chain Audit Protocols: Led the production of a suite of signal engineering audit protocols for Network Rail Headquarters Signal Engineers Group. The Audit Protocols cover all areas of signal engineering and will be used as part of the Link Up Supply Chain PROOF process to validate suppliers to Network Rail.

European TSIs for Interoperability: Planning, implementation and management of a trial analysis of European TSIs against RGSs covering the fields of Rolling Stock, Infrastructure and Operations. Work included cost and resource management as well as production of full trial report to Railway Safety.

Work undertaken during this period: (4) Other Projects:

Manchester South Capacity Improvement Project: Provided support helping Ansaldo Signalling to adapt their ACC signalling system for controlling the southern approaches to Manchester, including specifying the required signalling controls, reviewing the interfaces to the conventional signalling equipment, reviewing the safety logic to ensure that it conforms to Railway Group and Network Rail Company Standards (2003 – 2006).

Belfast-Bangor Track Relaying Project: Acted as Professional Head of Signalling for Mowlem Railways. The role involved the technical monitoring of the nominated signalling sub-contractor during the implementation phase of the works, in conjunction with the client's multi-disciplinary project team to oversee the successful implementation of the signalling system as part of the wider track and civil engineering works aspects of the project (2000/2001).

Axle Counter Concept Safety Case: Management of the Hazard Log for the Axle Counter Concept Safety Case and review of the Hazard Traceability (2000/2001).

Review and assessment of safety cases and safety-related documentation on a range of projects, including, Manchester South Capacity Improvement Project, Implementation of TEML41 and Foxboro SCADA systems, and the preparation of Railway Group Standard and Guidance Note for Cab Signalling Systems (2000).

Jubilee Line Extension Project: Working on Contract 202 of the, Design and Installation of Moving Block Signalling System throughout existing and extended Jubilee Line, utilising WESTRACE processor based interlockings.

Principally involved with Design Reviews, Systems Engineering EMC Compliance reviews, Material Compliance reviews, reviews of Design Compliance with LUL Standards & HMRI Guidelines associated with implementation of Fixed Block Contingency Signalling System (1997 – 2000).

Provision of consultancy support to the Railtrack East Anglia Zone Signal Engineer on a range of activities relating to signalling infrastructure management and development, with particular emphasis on Wire Degradation. Also provision of consultancy support to the Railtrack East Anglia Zone Signal Engineer on a range of activities relating to signalling infrastructure management and development, with particular emphasis on Electronic Signalling Systems i.e. IECC, SSI systems, etc. This included carrying out management system audits on behalf of the zone (1997).

July 1994 to August 1997

Electronic Systems Engineer; Railtrack East Anglia Zone

Working in the Zone Signal Engineer's Team, Paul had professional & technical responsibility for all electronic signalling related systems on the Zone and in particular all IECC and SSI systems controlling the zonal infrastructure. Representing the infrastructure owner, acted as Client Engineer, on a number of projects including, both trial and full implementation of significant hardware and software enhancements to IECC and SSI systems; implementation of Westrace processor based interlocking as a Level Crossing controller; Provision of TD/ATR system for North London Lines; Signalling Partnership Projects; Felixstowe Branch Resignalling. Duties included audits of Maintenance Contractors, infrastructure condition assessments, incident investigations as well as attendance at investment panel meetings, Safety Approval Panels and Safety Review Groups.

June 1991 to July 1994

Signalling Stageworks Engineer; Central Line Resignalling Project; London Underground Limited

Working on resignalling of the line utilising WESTRACE and associated ATP/ATO facilities. Duties included coordination of all stagework design and implementation activities; co-ordination of signalling aspects of all Enabling Works for introduction of 92 Tube Stock and Eastern End Points & Crossing Renewals.

September 1990 to May 1991

Signal Engineer; Docklands Light Railway

Secondment to Systemwide Resignalling Project Team where Alcatel's Transmission Based Moving Block signalling system was being introduced. Responsibility for design of signalling related aspects of new Control Centre.

August 1985 to September 1990

Various Posts within the Signalling Design Office, London Underground Limited

Commencing as a Technical Grade, reaching the post of Signalling Project Engineer (section leader) with responsibility for management of a team of 5 staff, plus trainees. Duties included preparation and checking of new and modified signalling circuitry, schemes, track plans, control tables, material schedules. Relevant projects included Neasden area resignalling; Aldgate area resignalling; Provision of Dot Matrix P.I.D.s for Piccadilly, Victoria and Circle Lines; East Finchley Recabling; Re-opening of Highgate Depot & production of Hazard Analysis Reports for application of JTC on the Bakerloo Line.

September 1981 to August 1985

Four-year indentured apprenticeship as a Trainee Technician with the Signal Engineering Department, London Underground. Training placements undertaken at a wide range of offices and depots including Signalling Design, Signalling Installation, Signalling Maintenance, Telecommunications, Equipment Development, Material Ordering.

Languages

English (Mother Tongue)

Spoken

Yes

Written

Yes

Reading

Yes