NAME OF PERSON	**Ian Ross**
NATIONALITY	British
POSITION	Senior Signalling Engineer
QUALIFICATIONS	ONC Electrical Engineering HNC Electrical Engineering (part completed) City & Guilds Electrical Installation Affilliate Member of the IRSE EngTech / TMIET
TRAINING	IRSE Licence – 7.8.110Fv2 – Engineering Manager – Project Engineering Signal Sighting Committee Member Competent Intermediate Signalling Technology Omnicom Surveror 3D Omnicom Inspector IRSE Licensed Maintainer, Signal Failure Investigator and Team Leader (license lapsed) SMTH Tester (certificate lapsed) PTS (AC/DC) Basic Telecoms Appreciation Course Route Relay Interlocking Solid State Interlocking Integrated Electronic Control Centre Hot-Axle Box Detectors Reliability Centred Maintainence Clamp Lock Points Maintainence HW2000 Point Machines Track Circuit Maintenance and Fault Finding Basic Signalling 1 & 2 Railway Communications
KEY EXPERIENCE	A railway Signalling Engineer with 28 years multi-disciplinary experience in the UK Rail Industry, Ian has gathered a unique and excellent mix of both front line railway signalling maintenance and signalling concept and design experience. This has included extensive experience in general signalling design, level crossing risk assessment and feasibility design, signal sighting investigation and assessment, signalling asset management as well as maintenance and faulting on a wide range of signalling systems and equipment. He has strong knowledge and experience of interpreting signalling standards and drawings, liasing with other disciplines and participating in the IDC/IDR process, including acting as, deputising for, and/or representing, the CRE as required. Most recently engaged in carrying out a variety of Project Management and Design Development roles, including those with CRE responsibilty for delivery and management of projects.

EXPERIENCE

May 2007 – Present **Kilborn Consulting Limited, Senior Signalling Engineer**

In the role of Signalling CRE, currently leading the design development of the GRIP Stage 3 outline design of the signalling infrastructure works associated with the construction of a new Traincare Facility at Scarborough and platform alterations at St Erth Station.

Responsible for the GRIP Stage 5 delivery of the signaling design on the extension of Bath Spa Station to accommodate 10-Car IEP Stock and future electrification. This project has particular challenges regarding cable routing and signal sighting.

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 is suitable and sufficient. As an assessment from this work, it was proposed to upgrade the crossings from AOCL to AOCL+B regardless of any housing development.

Development of a comprehensive feasibility design study for a major Midlands Intermodal Depot, DIRFT III, which is being substantially extended from its current layout. 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

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. Also been responsible for representing the CRE at IDC/IDR meetings with Network Rail.

Development and delivery of signaling feasibility and detailed design for a revised track layout associated with extending the maintenance shed at Beckon Depot, on the Docklands Light Railway.

Development of the design leading to the production of a Final Project Specification and Desktop Signal Sighting Report to support the reinstatement of Goods Loops at West Ealing.

Development of the design and production of a number of key Signaling Reports such as Assets Condition Assessment, Signal Sighting Report, Design Log, Operational Requirement Specification and Outline Project Specification to support the installation of a new IEP Depot at Doncaster. The works ranged from initial feasibility through to approval by MSRP and involved a number of key challenges including deputising for the CRE whilst they were on extended leave.

An assessment of the Signaling Design implications of track changes taking place to accommodate new IEP stock at Penzance and Reading Traincare Depots. This included an assessment signaled workings within the depot as well as shed depot protection systems.

Development of a number Signal Sighting Desktop studies covering a varied number of scenarios such as platform extensions, station enhancements and OLE installation works.

Development and production of a Signaling Feasibility Study report for the introduction of a new siding at Ferrybridge Power Station. The new siding supports the introduction of a new power plant at the power station and requires signaling design so that the new infrastructure can interface with the existing signaling infrastructure at the power station. The Feasibility Report details the impact of the alterations looking at issues such as risk assessments, operating procedures, condition assessments and new infrastructure requirements.

Development of 'suitable and sufficient' Level Crossing Risk Assessments for the Huddersfield-Bradford Re-Control Project, covering 11 No. level crossings. This involved close liaison with the local Level Crossing Risk Manager as well as a review and analysis of ALCRM data. The outcome of the reports detailed what solution best suited each of the level crossings.

Led the signaling design on the feasibility investigation and implementation of the signalling works associated with the extension on the maintenance depot on Docklands Light Railway at Beckton. Leading the production of Final Project Specification and Signalling Design Specification for the project and development of the associated detailed design.

Developed the GRIP Stage 4 signaling design works to support the North South Wales Journey Time Improvement project. Leading the development of Design Logs and Final Project Specifications. Leading the production of Level Crossing Risk Assessments for over 40 affected level crossings. This included design assessments at 4 No. MCB-OD Level Crossings. Providing technical support to the CRE throughout the project, as well as attendance at Option Selection and Value Management meetings as required.

Developed the GRIP Stage 3 signalling design, supporting our client in the delivery of Network Rails CP5 project objectives through the Tier 1 agreement. The work involves the development of the GRIP 3 Approval-in-Principle design through close collaboration with the client, TOCs and other disciplines. 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. Attendance at Option Selection and Value Management meetings as required.

Providing S&T engineering input to GRIP Stage 2 Feasibility Project looking at improving capacity on the lines between Par, Newquay and Truro. The work includes the development of an S&T design to reflect the Council's requirement for the provision of additional services.

Providing S&T engineering input to GRIP Stage 2 Fast Track Enhancement Project relating to the double tracking of the Soham Branch in the Anglia area. The work includes development of the S&T and level crossing 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. Attendance at, and input to, Opening and VM/QRA meetings, as well as site surveys, has also been required.

Delivering S&T engineering input to GRIP Stage 2 Fast Track Enhancement Project relating to the capacity improvements at Queenstown Road near Waterloo. 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 signal engineering requirements documentation together with associated Signalling Sketches and input to final Option Selection Reports. Included attendance at, and input to, Opening and VM/QRA meetings, as well as site surveys.

Ian carried out Signalling Maintenance Management Systems auditing on Irish Rail, covering all levels of the organisation from senior management through to area signal maintenance engineers. Sample audits of equipment were undertaken across the country and condition assessments were carried out to validate data held by the infrastructure controller. A comprehensive series of audit reports and recommendations were produced.

A similar exercise was also carried out for Docklands Light Railway on the infrastructure Maintainer, Serco Docklands.

Ian has been leading the Signal and Telecommunication engineering input into the GRIP Stages 1 – 4 analysis and report production on a number of multi disciplinary feasibility schemes on both Network Rail and non-Network Rail Infrastructure. This included feasibility work associated with the signalling alterations required to accommodate a new Carriage Washer unit at Heaton Depot and the upgrade of an open level crossing at Ferrybridge Power Station.

Ian carried out site survey and correlation activities, including production of associated reports, at Ferrybridge in connection with the resignalling of Ferrybridge Power Station railway.

He has previously completed the GRIP Stage 4 telecoms feasibility work and the intrusive survey work associated with the Wessex Package A and Package E Platform Extension projects, 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.

Other GRIP Stage 3 and 4 multi disciplinary feasibility project assignments on Network Rail Infrastructure have included:

- the provision of a new 12 Car Turnback Siding at Tunbridge Wells,
- the provision of a new 3 mile loop line at Axminster including partial resignalling, and
- the redevelopment of Wakefield Westgate Station & Platforms.

The above projects included preparation of reports on Signalling Asset Condition (using SICA), Signalling Equipment and Wiring Correlation, Final Project Specification, Telecom Approval In Principle Reports, input to the preparation of signalling scheme plans, recommendations for signalling controls and inputs into reviews covering the design and construction of the works.

Also involved in numerous asset inspections to identify Signalling and Telecoms infrastructure as part of bridge repair or replacement works during the period 2007 to the present.

February 2007 – September 2007 Metronet Rail Ltd, Signalling Project Engineer

Carried out the role of Signalling Project Engineer on London Underground on signalling enhancement and renewal projects. Took a lead role in wire degradation renewal projects, carrying out inspections in Signalling Equipment Rooms and determining extent of renewal works. Responsible for the design of method statements and safety plans; resource management and financial reporting; ensuring design specifications are met; revision of project budgets and timescales; identifying project trends. Successfully developed and signed off two main projects in Plaistow and Becontree.

December 2004 – January 2014 Performance Development Ltd, Business Director

Management of the company that delivered NVQ training for the rail industry. The role included project delivery, sales, personnel management, finance and securing funding and liasing with other training providers and companies such as Balfour Beatty, Jarvis and Network Rail. A major achievement was the successful development of the Internal Competency Management System and Quality Systems, which included all aspects of workplace assessment and verification of candidates. The company delivered over 300 candidates to successfully complete NVQs which enabled them to gain employed in the rail industry.

January 2002 – November 2004 Railway Performance Ltd, General Manager

Key responsibilities included the redevelopment of a business model and developing the business strategy, which enabled the company to increase their turnover. Hands on experience included acting as project consultant for various projects including the development of signalling works programs for Siemens. One major part of the role was to develop a competency development programme which enabled staff to progress by the use of training, coaching, mentoring and verification by assessment. Responsible for the development and training needs of over 100 staff which included developing an employee satisfaction survey and acting on the results.

April 2001 – December 2001 Railway Performance Ltd, Safety & Standards Manager/ Project Consultant

Development of the Quality Management System to reflect the role of the company and its future aims. This included ensuring that the company was compliant with industry standards and responsibility for ensuring compliance with external audit. Working together with Technical Heads and with safety professionals to ensure compliance through a continuing programme of site visits and audits.

September 1998 – March 2002 Railway Performance Ltd, Project Engineer/Consultant/Resource Manager

Initially employed as a Project Leader overseeing a number of different projects for several different clients, Ian rose to take on a consultancy role, advising on and implementing different and enhanced maintenance regimes. This included working with Railtrack, later Network Rail, on Risk Based Maintenance using the MACRO tool which led to him developing a maintenance programme for Track Circuits based on usage and risk. Other projects involved working with Balfour Beatty to develop and implement enhanced signalling maintenance regimes for HW Point Machines including the introduction of wear indicators and locking nuts and the training of teams on the introduction of the new maintenance regime. On the non-client side he was responsible for resource and equipment management within the organisation.

July 1992 – September 1998 EIMC/Balfour Beatty, Signalling Engineering Technician

Leading a signalling team carrying out maintenance and fault rectification on electrical and mechanical signalling equipment. Overseeing a maintenance area (Newcastle Central Station) and reducing failures in the area by over 50%. Equipment worked on included SSI, IECC, Clamp Locks, HABD, AWS, various Track Circuits, MA Signals, Route Relay Interlocking, mechanical interlockings, SGE point machines and level crossings.

September 1989 – July 1992 British Rail Engineering Technician

Working under the guidance of a team leader to assist in the maintenance and fault rectification of all types of electrical signalling and level crossing equipment.