



Curriculum Vitae



IAN MACKRELL

BSc MSc MCI Arb

Positions: Testifying Delay Expert Witness
Forensic Planning and Delay Analyst

Address: Top Pen-Y-Parc Farm
Pant Y Gof
Halkyn
Holywell
Flintshire CH8 8DH

Tel: +44 (0) 330 043 0395

Email: ianmackrell@im-consult.co.uk

Web: www.im-consult.co.uk

Nationality

British

Education

MSc Construction Law & Arbitration, The Robert Gordon University, United Kingdom.

Dissertation Title: An Investigation into the current methodologies of delay analysis techniques.

BSc Applied Physics University of Northumbria at Newcastle, United Kingdom

Professional Membership

Member of the Chartered Institute of Arbitrators (MCIARB)

Geographical Experience

Europe, Asia and South America

Expert Witness Training

Professional Solutions, 2016

Key Skills

Excellent knowledge and experience of different delay and disruption methodologies. Good working knowledge of different standard forms of contract. An advanced user of most IT software packages, including excel, MS Project, Asta Powerproject, Primavera (P3 & P6) and Acumen Fuse. Excellent knowledge of Earned Value Analysis and other project controls including planning, risk management, change control, mitigation strategies and commercially focused. Experienced roles as independent Delay Expert and also assisting appointed Delay Experts; Claims consultant ; Estimating; Project Engineering; Procurement; Planning; Subcontract Management; and as a Commercial Manager.

More than 15 years of experience in the construction and claims industry. Ian has provided expert delay opinion in Alternative Dispute Resolution Forums and within litigation proceedings. Areas of expertise include independent expert opinion on time related issues, delay analysis for claims and defence, planning, critical path method (CPM) scheduling, and contract administration. Skills also comprise programme management, earned value analysis, risk management, change control,

mitigation, estimating, project engineering, procurement, and subcontract management. Projects consist of on-shore and off-shore wind farms, topsides, power transmission and distribution, waste-to-energy power plants, cogeneration power plants, nuclear facilities, gas pipelines, tunnels, oilfields, railway stations, hotels, ports, and petrochemical and chemical facilities.

Able to implement different delay and disruption analysis techniques in line with the contract or common/civil law for extension of time and disruption claims or assessments. Can identify and establish critical delays and prepare independent expert reports of my findings.

EXPERIENCE – MAJOR CLAIMS

September 2013 to Present

Development of a twenty-seven high rise building, Murray & Roberts (Botswana) Ltd v CitySkapes (PTY) Ltd, Botswana, Independent Expert Opinion in Arbitration (ICC)

Instructed by solicitors on behalf of the Employer (the Respondent) to provide a response to the claimant's expert report and prepare a report on whether the claimants asserted Relevant Events caused any critical delay. A line of approach method was adopted to establish the likely as-built critical path therefore enabling an assessment of the purported Relevant Events and their effects on the Completion Date. Testified.

Refurbishment of Overhead Transmission Line, Midal Cables Limited v Amec Foster Wheeler Group, UK, Part 35 Independent Expert Opinion for The High Court of Justice

Instructed by the Claimant's solicitors to provide an independent expert opinion for the High Court of Justice of the Defendant's counterclaim for losses incurred on the Project due to alleged defective conductor supplied by Midal. The counterclaim mainly consisted of losses arising from prolongation of the Works because of missed deadlines of outages and loss of productivity for sections of the Works due to winter working caused by the defective cable. The approach taken was to analyse the status or works for each section before the defective cable arose to establish whether each section could have been completed before the end of the outage anyway. The Parties settled following the issue of the experts reports before the Hearing.

Remodelling and refurbishment of 2 Soho Square, London, MPL Communications Ltd v Forcia Ltd, Part 35 Independent Expert Opinion for Adjudication

Instructed by solicitors on behalf of the Employer (the claimant) to provide a Part 35 Expert Opinion on Contractor's extension of time, provide an opinion on the likely as-built critical path and explain the likely causes of critical delay to the Works. The causes of critical delays were mainly due to statutory undertakers, unforeseen existing defects, late installation of fire rated glazing package and delays in commissioning. Proceedings ongoing.

Moin Terminal, APM Terminals, Costa Rica, Independent Expert Opinion in DAB

Instructed by the Employer to provide an independent expert opinion for DAB proceedings on the critical delays to the Project's contractual milestones and the likely causes of those critical delays. This was achieved by using the Project's primary records to assess the status of the Works at each key date to identify any shift in the critical path thus determining the contemporaneous critical path. A retrospective analysis was then performed to identify the critical delays which allowed investigation of the probable causes. Parties settled following issue of report.

Modernisation of the Callao North Terminal, APM Terminals, Peru, Independent Expert Opinion in DAB

Instructed by the Responding party in DAB proceedings to provide an independent expert opinion on the Referring party's expert report. The \$34m dispute revolved around the likely causes of critical delay to the Sectional completion dates and the effect of other concurrent delays in relation to prolongation costs. Oral evidence given at the hearing.

Widening Seaforth Passage, ABEKO Dredging and Marine Contractors Ltd, UK, Independent Expert Opinion in Adjudication

Instructed by ABEKO (sub-subcontractor), on behalf of the Main Contractor, to provide an independent expert opinion for adjudication as to the delaying effects of alleged Employer delay events had on the Completion Date during the demolition works of the quay side. The events mainly consisted of the change of demolition methodology, the inflow of silt from outside the passage caused by passing ships and numerous other delays to the barge vessels performing the demolition works.

Solar Thermal Power Plant, Ashalim Plot B, Chemo Aharan Ltd v GE Israel Ltd, Israel, Lead Assistant to Expert in Arbitration

Lead Assistant to delay expert instructed by solicitors on behalf of the claimant to provide an opinion of the causes of delay to the erection of the steam turbine and generator and the rest of the mechanical works. An 'as-built v as-planned' approach was used to establish the as-built critical path enabling the identification of the critical delay and their causes. Proceedings ongoing.

Ashdod 55 Kw Cogeneration Power Plant, M&W Group (Israel) Ltd v Grid Solutions SAS, Lead Assistant to Expert in Arbitration

Assistant to delay expert instructed by solicitors on behalf of the Main Contractor (M&W) to provide an opinion on the extent of the Subcontractor delays (Grid Solutions) had on the Completion Date of the Works between M&W and its Employer. Proceedings ongoing.

52 Lime Street London, William Hare Ltd, Delay analyst

Preparation of an extension of time claim for the Subcontractor in Adjudication proceedings to off-set the general delay damages levied by the Main Contractor. The claim also shown that the Subcontractor was never on the Main Contractor's critical path thereby asserting that the Contractor has no right to apply the LD's within the Subcontract that was linked to Main Contract.

Al Maktoum International Airport, Dubai, FK Construction LLC, Delay analyst

Preparation of an extension of time and disruption claim on behalf of the Sub-contractor to the Works. The delays mainly consisted of late and ad-hoc release of areas and preventions due other subcontractors, such as incomplete ground works and defective steelwork. The delay analysis used the project records to develop an as-built programme which then allowed a retrospective analysis.

Project Orpheus, Cardboard Production Facility, Ellesmere Port, UK, Peel Group, Delay analyst

Assessment of the Contractors extension of time claim and preparation of the Employers delay analysis to show the effect of a delay to the civil design had on the interim milestones and Practical Completion. The Contractor's progress reports, payment applications and site photographs were used to assess the status of Works at the time when the delaying event occurred. An intuitive critical path was then established and assessed the facts as they emerged to determine whether the delay was critical to the milestones.

Teesside Renewable Energy Biomass Power Station, Teesside, UK, John Graham Construction Ltd, Delay analyst

Preparation of an extension of time claim for 15Nr milestones and the date for completion using a retrospective methodology to identify which activities were critically delayed that impacted the completion date of each milestone. The claim also reported the probable causes of those delays supported by the necessary evidence.

Semi-Submersible Drilling Unit, Hyundai, South Korea, Delay Analyst

Initially instructed by solicitors to provide delay analysis to support two Letters of Claims. The analysis mainly shown that delays to fabrication of numerous modules caused by unreasonable specification requirements affected the keel laying milestone. It also shown that delays to the commissioning of subsystems predominantly caused by unreasonable and unlawful punch items would have affected the Delivery Date. The Contract was terminated before completion of the Vessel.

Further instructed to provide support to the solicitors and independent delay expert in arbitration proceedings. This involved a very detailed delay analysis of numerous sections of the Works using primary evidence to show the likely causation of the critical delays that were identified by the delay expert.

Oman Oil Company Exploration & Production, ABB Gas Processing Plant (Block 60) project, Sultanate of Oman, Delay Analyst

Instructed by the Company to provide an assessment of the Contractor's claims for delay and acceleration. The purported claims consisted of numerous delays and contentious issues throughout the life cycle of the project, such as delays arising from the close out actions from the HAZOP study which the Contractor classed as being unreasonable and delays caused by the Company's interference during the construction and commissioning phase. The assessment reported a strictly contractual view as well as a pragmatic view for negotiation purposes.

Kvaerner Stord AS, Edvard Greig EPC Topside Project, Stord, Norway, Delay Analyst (Expert opinion support)

Assistant to a delay expert who was instructed by Kvaerner to strengthen their existing claim by producing a schedule analysis to show that their loss of productivity was mainly caused by increased scope of works.

Jacobs E & C Ltd, Markinch Biomass CHP Project, Marckinch, Fife, Delay Analyst (Expert opinion support)

Assistant to a delay expert who was instructed to prepare an independent investigation of the likely causes of delay to the contractual completion milestones. This was achieved by producing as-built critical paths as well as as-built near critical paths to show that other delaying events could be construed as having delayed the milestone dates. This was conveyed as an expert style report.

Beatrice Offshore Wind Farm, Seaway Heavy Lifting, Advisory

Advisory services provided to Seaway Heavy Lifting who were responsible for the procurement and installation of the Jackets for the 84 wind turbines. Duties began in the early stages of the procurement of the subcontractors providing advice on extension of time claim issues based on proposed clauses of the subcontracts. This role ran into the procurement stage of the Project providing planning and delay analysis advice.

Moncobra SA, Pointe Jarry Project, Guadeloupe, Delay Analyst

Preparation of claim for a reasonable time to complete and additional payment (including disruption cost) due to the ambiguous contractual completion dates and delays caused by lack of access, increased quantities and modifications to the Works. This subsequently led to arbitration where duties then included assisting the lawyers (German law) for preparation of the Statement of Claim and supporting evidence, particularly for the reasonable time to complete, prolongation and disruption of the Works sections.

ABB SpA Process Automation, Saih Nihayda Condensate Stabilisation Plant, Delay Analyst

Preparation of an extension of time claim using a retrospective window analysis methodology to show that a delay to the procurement of a particular piece of equipment caused by the Employer affected the design of the associated equipment and the Completion Date and other key milestones relating to the engineering deliverables within the Contract.

ABB SpA Process Automation, El Merk Project, Algeria, Delay Analyst

Conducted individual assessments of the change orders received from the Employer to show the effect on the time for completion and produced an overall summary claim to show the overall effect on the contractual Completion Date thereby taking into account concurrent claims.

Saudi Bin Laden Group, Dar Al Qibla Complex Project, Al-Madina Al Munawarah, Kingdom of Saudi Arabia, Delay Analyst

Preparation of a reply to the Employer's response and counterclaim to the Contractor's previous extension of time claim (interim claim) and produced a final extension of time claim using a windows analysis methodology. The delays predominantly involved major variations to the interior of the building and the Employer's indecisiveness in approving the Contractor's drawings. This affected the testing and commissioning stages of the project and, ultimately, the time for completion.

Al-Rashid Trading & Contracting Company Limited, RTCC - EOT and Cost Claim Preparation Project, Riyadh, Kingdom of Saudi Arabia, Delay Analyst

Prepared an extension of time claim using a windows analysis methodology. The delays were related to design issues at the beginning of the project whereby the Contractor took on rectifying the Employer's design with no obligation to do so. As a result, the construction stages and time for completion were adversely affected.

Barnardo's housing development, CFS Contracting Ltd, UK, Delay Analyst

Delay analysis for an extension of time claim in adjudication proceedings using site diaries to establish an as-built programme for the whole of Subcontract Works to enable the identification of critical delay periods. The delay report included the causation of the critical delays attributable to the Main Contractor which mainly consisted of access issues caused by other subcontractors.

Mercury Engineering Ltd, Thermal Power Station Project, Runcorn, Cheshire, Delay Analyst

using a window analysis methodology. The delays consisted of late access to areas of work and obstructions mainly caused by scaffolding.

Various other roles

- Preparation of numerous other extension of time, acceleration and disruption claims and assessments;
- Continual support to Sub-Contractors, Contractors and Employers on programming issues throughout the life cycle of their projects;
- Contractual advice;
- Delay analysis/assessments for many other adjudications; and
- Planning and project control advice.

Company Positions

September 2013 to November 2017	– Director, HKA (formerly Knowles)
November 2017 to April 2021	- Managing Director, IM Consult (Self-employment)
April 2021 to February 2022	- Director, Turner & Townsend
February 2022 to Present	- Managing Director, IM Consult (Self-employment)

PREVIOUS EXPERIENCE

August 2011 – August 2013:

Company:	Fabricom GDF Suez
Role:	Commercial Manager/Project Control Manager
Project:	Various Projects, Liverpool, England, United Kingdom.
Duties:	Head of the Commercial, Contract, and Planning department for a consulting, engineering, construction, and supply services company specialising in the oil and gas

industry. In addition, monitoring staff to verify work performed was per company procedures and contract requirements.

Role: **Lead Planning Engineer & Project Control Manager**
Project: **Runcorn Thermal Power Station Project, Runcorn, England, United Kingdom.**
Duties: On behalf of a consulting, engineering, construction, and supply services firm specialising in the oil and gas industry, provided planning services during the construction of the largest waste-to-energy plant of its type being built in Europe. Duties included producing a detailed baseline and updated schedule, detailing three-to four-week look-aheads, revising histograms based on current performance and forecasts, and updating "S" curves inclusive of delays. Also managed and prepared extension of time and disruption claims by using and setting up methodologies such as the "measured mile technique." In addition to overseeing other smaller projects with intermediate planners, established the Project Control Department by developing processes and procedures with regard to earned value management and change control.

February 2010 – August 2011:

Company: **Land & Marine**

Role: **Senior Planning Engineer**
Project: **National Grid (NG), Emissions Reduction Projects, Scotland, United Kingdom.**
Duties: Worked for an engineering and construction contracting company, managed a team of planners while based on site for two multimillion-pound emission reduction engineering, procurement, and construction (EPC) projects. Provided a fully costed and resourced programme of works using Primavera P6 for design, engineering, procurement, construction, and testing and commissioning (including documentation) elements.

Also set up progress reporting systems, earned value management processes, cost and schedule mitigation, and risk processes. In addition to producing cause-and-effect schedules with early warning notices and extension of time claims, performed monthly resource analysis, updated "S" curves showing cost and schedule variances, and chaired weekly planning meetings for advancing project controls. Specifically, projects included:

- **St. Fergus Gas Terminal, St. Fergus, Aberdeenshire.** Works comprised the installation of a new compressor station within a live gas plant.
- **Kirriemuir Compressor Station, Kirriemuir, Angus.** This project involved the installation of a new gas compressor station within a live gas plant.

June 2008 – February 2010

Company: **AB Rheads Project Services**

Role: **Senior Planning Engineer**
Project: **Blue NG, Beckton and Southall Combined Heat and Intelligent Power (CHiP) Projects, London, England, United Kingdom**
Duties: Employed by a professional services firm, fulfilled a client-based role for a joint venture that planned to construct the UK's first vegetable oil (agrofuel) power plants. Proposed works comprised the building of a 19.5-MW plant in Beckton and an 18.5-MW plant in Southall. Duties comprised maintaining contractual obligation milestones, implementing earned value management on the project, and delay analysis.

Role: **Project Control Manager**
Project: **National Grid (NG), Gas Pipeline Project, North West, United Kingdom.**
Duties: On behalf of a professional services group, worked on site for a client in the gas pipeline industry. Managed and educated teams of planners within the group's project control department in relation to earned value management, chaired planning meetings, and assessed the critical path method (CPM) on the contractor's programmes. Also, analysed early warnings and compensation events, resources, and cost schedules using a detailed work breakdown structure. In addition to mitigating schedule and cost risks, verified the contractor's compliance with the contract, prepared earned value reports for higher management (board level), and produced and compared as-built programmes. Specifically, projects included:

- **Aberford to Pannal Pipeline.** Works comprised the installation of approximately 27.5 kilometres of 42-inch cross-country gas pipeline, including tunnelling, from Aberford to the east of Leeds to Pannal near Harrogate.
- **Asselby to Aberford Pipeline.** This project involved the installation of approximately 33 kilometres of 42-inch cross-country gas pipeline, including tunnelling, from Asselby to Aberford.
- **Easington to Ganstead Pipeline.** Works consisted of the installation of approximately 32 kilometres of 42-inch cross-country gas pipeline, including tunnelling, from Easington on the east coast north of Humber to Ganstead in East Yorkshire.
- **Harefield to Southall Pipeline.** This project included the installation of approximately 18 kilometres of 42-inch cross-country gas pipeline, including tunnelling that connected into the existing network.

January 2006 – June 2008

Company: **Interserve Industrial Services**

Role: **Senior Planning Engineer**
Project: **Nuclear and Petroleum Projects, United Kingdom.**
Duties: Working for a support services and construction company, was responsible for establishing and incorporating relevant process control systems such as earned value management within the planning department. Worked on site developing baseline and acceleration programmes, as well as extension of time claims. Duties also comprised progress monitoring, rescheduling, and managing existing programmes by producing "S" curves and histograms. In addition, assisted the estimating department with tender programmes.

Role: **Project Engineer**
Project: **URENCO (Capenhurst) Limited, Uranium Enrichment Plant Project, United Kingdom.**
Duties: Seconded to a supplier of enriched uranium and associated technologies to provide project engineering services. Responsible for planning, procuring bills of materials, man-hour targeting, and establishing a progress system for the installation of mechanical infrastructure at a uranium enrichment plant. Also, carried out related projects on site as Project Manager/Engineer, managing multidisciplinary teams such as design, steelwork, mechanical, electrical and instrumentation installation.

June 2004 – January 2006

Company: **AMEC**

Role: Planning Engineer
Project: Kemira, Chemical Plant Project, Ellesmere Port, Cheshire, England, United Kingdom.
Duties: Seconded to a global chemicals company to assist in establishing an emergent work planning team for a 12-week plant shutdown and performing costing for emergent work activities.

Role: Assistant Planning Engineer
Project: INEOS Chlor, Chlor-Alkali Plant Project, Runcorn, England, United Kingdom.
Duties: Seconded to a fluorine chemical manufacturing company to set up and maintain project controls during the construction of a chlor-alkali plant built on a brownfield site at the company's existing manufacturing complex in Runcorn. Reported to the Senior Planning Engineer regarding resource analysis and progress position.