

SPECIALIST PROFILES

EXPERT ADVISOR/EXPERT WITNESS

CONSTRUCTION LITIGATION

Welcome to Halcrow

Halcrow specialises in the provision of planning, design and management services for infrastructure development worldwide. With interests in transportation, water, power, maritime and property, we undertake commissions in over 70 countries from a network of nearly 30 UK offices and a further 40 offices worldwide.

At the heart of our business is our specialisation in materials performance. With experience in all common construction materials, including timber, asphalt, concrete and steel, we offer our clients the latest advice in deterioration management for their assets, including maintenance and remediation.

An understanding of the properties and performance of materials at all stages of their use is essential for the design, construction and maintenance of all construction projects. Halcrow's materials technology experience covers all sectors, including bridges, roads, pavements, buildings, tunnels, coastal structures, waste management, ports, power generation, oil and gas, water and effluent treatment works.

Halcrow has approximately 8,000 employees, over 60 of whom are materials technology specialists able to support our construction projects worldwide.

Expert Advisors – Construction Litigation

Our materials specialists are recognised experts in their field and are sought after by the legal profession to provide independent technical advice on a wide range of disputes involving the use of materials. While many of our expert investigations are accepted as definitive and avoid the need for court judgements, our senior employees have experience of the courtroom and cross examination, as well as accelerated dispute resolution processes such as mediation, adjudication and arbitration. Recent projects from around the world include sports stadia, car parks, warehouse floors, docks and road pavements and cement burn personal injuries.

Through this experience our employees are invited onto British Standards committees to help industry build and maintain its assets better. Many of our engineers have authored and presented technical papers at national and international conferences and maintain active links with materials departments at universities.

A profile summary for some of our materials technology specialists with expert witness experience is presented below.



Specialist Profiles

Name	Position	Key expertise
Professor Peter Robery	Regional Technical Director	Concrete Technology, Floors, Tunnels, Bridges, Investigations and Repair
Mr David Slater	Senior Consultant	Concrete Technology, Flooring and Structural Engineering
Mr Robin Baldwin	Principal Engineer	Concrete Technology, Materials and Waterproofing
Mr David Fanthorpe	Principal Pavement Engineer	Pavement Engineering, Design, Quality Auditing
Mr Jeremy Ingham	Senior Engineer	Concrete, Building Stone, Historic Structures, Fire Damage
Mr Peter King	Associate Director	Pavement Engineering, Assessment and Investigations
Mr Jonathan Knights	Principal Engineer	Concrete Technology, Materials and Thermal Modelling
Dr Davies Mulenga	Senior Engineer	Concrete Technology, Flooring and Structural Engineering
Mr David Pocock	Director of Engineering	Concrete Technology, Investigations, Maintenance and Repair
Dr Kate Turnpenny	Principal Engineer	Corrosion Protection of Metals, LAT Corrosion and Paint Systems
Mr Don Wimpenny	Principal Engineer	Concrete Technology, Flooring, Materials and Thermal Modelling

Other Expert Witness Services

In addition to the above experts in materials, Halcrow has over 70 other specialists registered on its internal skills database as having experience as expert witnesses in the following 28 skill areas. With such depth of resources, you are almost certain to find someone able to assist with your case.

- air transport
- bridges
- building services engineering
- building structures
- coastal engineering
- construction supervision
- dams and hydraulic structures
- drainage
- economics and business solutions
- environment
- geomatics and GIS
- geotechnics and engineering geology
- highway performance improvement
- road pavements
- highways
- knowledge management
- mechanical engineering and electrical engineering
- marine structures
- materials technology
- planning and architects
- ports and terminals
- rail systems & support
- river engineering
- S & T engineering
- transport planning
- urban and regional planning
- water and power structures
- water and wastewater
- water management

Professor Peter Robery

Qualifications

BSc (Hons), Civil Engineering
PhD, Concrete Technology
Chartered Engineer - CEng

Affiliations

Member, Institution of Civil Engineers
President, the Concrete Society (2006/08)
Member, Institute of Concrete Technology
Member, American Concrete Institute
Member, UK Register of Expert Witnesses
Member, Expert Witness Directory
Member, Institute of Asset Management
Visiting Professor, University of Leeds



Present position

Regional Technical Director

Expertise

- Expert investigation and diagnosis
- Preparing expert witness reports for litigation
- Trained and served as a single joint expert
- Practical experience of giving expert evidence in mediation, adjudication, arbitration and in the Technology and Construction Court
- Concrete technology including mix design and the effects of waterproofing, water-reducing and air entrainment admixtures
- Specification and testing of concrete repair products paints and coatings
- Investigation of failures in concrete basements, joints and liquid retaining structures
- Concrete placing, bleed and shrinkage cracking
- Assessment of fire-damaged structures
- Construction in hot/tropical climates
- Underground concrete construction, including tunnels, basements and car parks
- General forensic examination of construction failures
- Technical representative on British and European Standards committees on concrete repair, epoxy-coated reinforcing bar and concrete admixtures
- Technical specialist to Institution committees on car park design and maintenance, repair of thaumasite structures and fire engineering
- Author of over 50 papers on concrete-related matters

David Slater

Qualifications

BSc (Hons), Civil Engineering
Chartered Engineer - CEng

Affiliations

Fellow, Institution of Civil Engineers
Member, Institution of Structural Engineers
Member, Concrete Society & Design Group
Member, DETR Expert Group on Thaumasite
Member, UK Register of Expert Witnesses
Member, BSI Ad hoc Committee on concrete specifications for chloride environments for BS8500



Present position

Senior Consultant – materials technology

Expertise

- Preparing expert witness reports for litigation
- Giving expert evidence in the TC Court
- Expert witness on behalf of contractors and owners
- All aspects of concrete technology, in particular durability
- Specification failures and workmanship issues
- Concrete modelling software
- Construction in hot/tropical climates
- Flooring failures, including concrete, polymer-modified cementitious, magnesite, synthetic anhydride, epoxy resin
- Magnesium oxychloride passive fire protection
- Diaphragm walling concrete construction
- Basement construction
- Reinforced concrete flat slab design and construction
- Failures due to complex structural design errors
- Author of over 20 chapters, papers, articles and presentations on construction projects and concrete-related matters

Robin Baldwin

Qualifications

BSc (Hons), Geology
MSc, Geomaterials
Chartered Engineer - CEng

Affiliations

Member, Institute of Materials, Minerals and Mining

Present position

Principal engineer



Expertise

- Preparing expert witness reports (concrete and waterproofing issues)
- Served as a single joint expert
- Review of project documentation, agreements, contracts and remedial works
- Examination of above and below ground car park and building structures and waterproofing. Examination of Grade 4 basements in new building and alleged defects in detailing and in concrete
- Design and supervision of site investigation and flood testing of waterproofing to concrete deck with mastic asphalt surfacing
- Expert opinion on extent and cause of defects in concrete and of water ingress
- Served as assistant to expert carrying out tasks delegated and reviewed by the expert
- Site investigation of deflections in an industrial floor, and of construction type and dimensions, and quality of materials exposed during demolition
- Author of 19 papers and on-line articles on concrete, materials and waterproofing-related matters

David Fanthorpe

Qualifications HTEC, Civil Engineering
Trained lead assessor for ISO9001



Affiliations Member, Institute of Highways
Present position Principal engineer

Expertise

- Preparing expert witness reports
- Specification of paving materials specifications in the UK and overseas
- Analysis of deflectograph and falling weight deflectometer data
- Specialist in paving concrete, asphalt and block paving
- Wide-ranging technical knowledge of Highways Agency road specification and design
- Analytical pavement design for highways and heavy duty port pavements in UK and overseas
- Management of materials testing on major highway schemes
- Evaluation of cause of failure for all types of infrastructure assets, construction processes, treatments and materials in UK and overseas
- Assessment of road asset condition and value
- Setting up testing and quality management systems

Jeremy Ingham

Qualifications BSc (Hons), Geology
MSc, Geomaterials
Chartered Engineer - CEng
Chartered Scientist - CSci
Chartered Geologist - CGeol
European Geologist - Eur Geol



Affiliations Fellow, Geological Society
Fellow, Royal Microscopical Society,
Member, British Institute of Non-Destructive Testing

Present position Senior engineer

Expertise

- Preparing expert witness reports for litigation
- Defects in concrete structures
- Clams involving defective aggregates and fill materials
- Failures of mortars, plasters and renders
- Failures of flooring materials including concrete, screed and tiles
- Assessment of fire-damaged buildings
- Building stone defects, including cladding, masonry, flooring and paving
- Investigation of roofing slate failures
- Historic structures and traditional building materials
- Petrographic examination of concrete and other construction materials
- Laboratory testing of construction materials
- Author of over 15 papers and articles regarding construction materials

Peter King

Qualifications BSc (Hons), Civil Engineering
Chartered Engineer - CEng

Affiliations Member, Institution of Civil Engineers - ICE

Present position Associate Director (Transportation)



Expertise

- Preparing expert witness reports for litigation
- All aspects of pavement engineering
- Workmanship issues
- Materials specifications
- Specifications for construction processes
- Pavement modelling software
- Construction in varied climates
- Materials behaviour
- Skidding resistance
- Investigation of premature failures
- Pavement condition assessment
- Highway and ports pavements

Jonathan Knights

Qualifications BSc (Hons) Combined Sciences
MSc, Geomaterials
Chartered Materials Engineer - CEng

Affiliations Member, Institute of Materials, Minerals & Mining – MIMMM

Present position Principal materials engineer



Expertise

- Preparing expert witness reports for litigation
- Investigation, reporting and advice on concrete and construction materials issues
- Failure investigation of movement joints
- Pre-casting moulds and pre-stressing equipment systems
- Delayed Ettringite Formation and Thaumasite reaction in concrete
- Finite Element Thermal modelling and analysis in mass concrete/large pours
- Durability of concrete in aggressive environments, including the Middle East
- Mix design and construction problems associated with cement clinker silo.
- Investigation of concrete piles and cracking in plant, bridges and highways structure
- Low and intermediate level waste containment in reinforced concrete
- High performance cementitious systems, including, grouts mortars and concretes
- Author of papers and presentations on sustainability and durability of concrete

Dr Davies Mulenga

Qualifications BEng, Civil Structural Engineering
MSc (Eng), Civil Structural Engineering
PhD, Concrete Technology/Civil Engineering
Chartered Engineer - CEng
European Engineer - EUR ING



Affiliations Member, Institution of Civil Engineers
Member, Germany Institution of Engineers (VDI)
Member, European Federation of Engineers (FEANI)
Honorary Research Fellow, University of Birmingham

Present position Senior engineer

Expertise

- Preparing expert witness reports for litigation
- Giving expert evidence in mediation proceedings
- Design, specification, inspections, investigation and testing of concrete
- Rehabilitation, maintenance and repair of concrete structures
- Specialist in durability of concrete structures with emphasis on thaumasite form of sulfate attack of concrete
- Structural engineering and finite element analysis
- Investigations into construction process and structural aspects of cores, arch bases, joints and precast concrete members of prestigious stadia
- Failure of concrete structures including movements joints in bridges, LRT System and viaducts.
- Flooring failure investigations, design review and analysis of industrial floors
- Durability assessment of structural concrete including ultra high performance concrete and checks on adequacy of structural designs
- Alkali-silica reactions in concrete
- Author of over 15 papers on concrete-related matters

David Pocock

Qualifications BA (Hons), MA, Engineering
Chartered Engineer - CEng



Affiliations Member, Institution of Civil Engineers
Member, The Concrete Society
Member, UAE Committee on Durability Testing of Concrete

Present position Director of Engineering

Expertise

- Preparing expert witness reports for litigation and dispute resolution
- Giving expert evidence at conferences with counsel
- Durability, repair and protection of structures
- Failure in concrete basement structures
- Failure in precast concrete cladding panels
- Premature deterioration of concrete in the Arabian Peninsula
- Preparation of specifications for repair and protection
- Supervision of new construction and repair works
- Standards committees on concrete repair and protection and cathodic protection
- Author of over 25 papers/articles on concrete and protection

Dr Kate Turnpenny

Qualifications BSc (Hons), Applied Science
MSc, Corrosion Science and Engineering
PhD, Corrosion Science

Affiliations Member, Institute of Corrosion
Associate, Institute of Materials

Present position Principal engineer



Expertise

- Preparing expert witness reports for litigation
- Giving expert evidence at conferences with counsel
- Materials, metallurgical and processing evaluations
- Site condition surveys and corrosion inspection/testing
- Corrosion investigations such as bimetallic corrosion and stray current corrosion
- Assessment of fire damaged buildings and passive fire protection systems
- Concrete condition assessment, repair and maintenance techniques
- Specification and working documents for structural steelwork
- Paints and coatings performance and specification
- Coating failure investigations
- Specification and selection for stainless steel, ordinary carbon steel and cast iron
- Assessment of corrosive failures in waste water management systems
- ALWC/MIC investigation and assessment
- Soil resistivity investigations for corrosivity assessment

Don Wimpenny

Qualifications City and Guilds Concrete Technology and Construction
MPhil, Construction
BSc (Hons), Civil Engineering
Chartered Engineer - CEng

Affiliations Member, Institute of Materials, Minerals and Mining
Member, Institute of Concrete Technology,
Member, the Concrete Society,
Associate Member, Society of Expert Witnesses

Present position Principal engineer



Expertise

- Preparing expert witness reports for litigation
- Giving expert evidence at hearings and in Crown Court
- Trained in preparation of expert reports
- Concrete technology matters, including industrial and office flooring, finishes, thermal analysis, and water-retaining joint design
- Materials selection and durability corrosion protection
- Design, specification, inspections, investigation and testing of concrete
- Failures in floor coverings, including epoxy and sheet finishes and failures due to blistering and water entrapment
- Thaumassite form of sulfate attack of concrete
- Alkali-silica reactions in concrete
- Author of over 20 papers and articles on cement and concrete-related matters

For further information on our Expert Services, please contact:

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