

**Career Details of:            Dr. Tony Cox MBE            *R.A. Cox Risk Management***

**Academic:**            M.A. (First Class Honours) in Mechanical Sciences, *Cambridge*  
Ph.D. in Air Pollution Science, Imperial College, *London*

**Professional:**      Chartered Engineer  
Fellow of the Institution of Mechanical Engineers  
Specialist Fellow, International Institute of Risk & Safety Management  
HSE's Occupational Safety & Health Consultants Register

**Honours and appointments:**    Member of the Order of the British Empire (MBE)  
Member, Advisory Committee on Dangerous Substances 1993-2005  
Chairman, UK Biocides Consultative Committee, 2001-2006  
President, Society for Risk Analysis (Europe) 1992

**Legal Directories:**        Fellow of the Academy of Experts  
The Law Society of Scotland *Directory of Expert Witnesses*  
The *UK Register of Expert Witnesses*  
Association of Personal Injury Lawyers *Experts Database*

**Legal Services key points:**

- Independent Consultant with a wide variety of clients, no affiliations or conflicts.
- Legal services include: accident investigation; advice on “*safe systems of work*” and health & safety management duties; causation evidence in personal injury and other accidental losses; defence and prosecution work in health & safety and environmental criminal cases including gross negligence manslaughter; public inquiries for land-use planning for hazardous or environmentally sensitive industries.
- Trained in expert services and conversant with CPR rules relating to experts.
- Experience and credibility as a Single Joint Expert, some experience of mediation.
- Case experience from small to huge cases (*Buncefield Explosion, Piper Alpha, Ladbroke Grove Rail Accident, Larkhall gas explosion, Corby Group Litigation*).
- Evidence presented in Court on 19 occasions, some very long appearances (days).
- Maintains balance between: civil/criminal; prosecution/defence; PI claimant/defendant; litigation/advisory reports.

**Summary of Experience:**

Tony Cox is internationally known for his work in the industrial safety and risk assessment fields, and in his earlier career he was the Project Manager for several major risk assessment studies, including: the *Channel Tunnel* (1994), the *Gullfaks A* offshore platform (1984) and the Rotterdam/Europoort Safety Project (1977).

He has a thorough technical understanding of mechanical, electrical, chemical, and structural systems and the causes and effects of fires, explosions, impacts and occupational hazards in the workplace. He has been prominent in the understanding of human errors and management factors in the causation of accidents and occupational ill-health, and has provided advice to industry on safety and risk management, and to the legal profession on ***safe systems of work***.

His recent **health & safety management** work includes: upgrading safety performance and reform of corporate governance in a major UK construction company; evidence to the Ladbroke Grove Rail Inquiry on safety regulation and management; health, safety, environment and asset integrity management system for a major oil company; safety management for firefighters in the London Fire Brigade; advice on a corporate risk management system for a major food and drinks corporation.

He was appointed MBE in June 2001, for services to the HSE's Advisory Committee on Dangerous Substances.

#### Career:

**2001 Independent Chair, Biocides Consultative Committee** (part-time appointment).

- **2006** The committee advised the UK government on the approval of biocidal products other than plant protection products, for sale within the UK.

**1994 Independent Consultant.** Assignments have included:

- Advice and Expert Report on the direct and indirect causes of failures of tanks, pipework and bunds during the **Buncefield Incident**, which led ultimately to environmental contamination of an aquifer by petroleum products and firefighting foam. This work was referred to in mitigation of a guilty plea to criminal charges brought against one of the tank farm operating companies, under COMAH regulations.
- Advice and presentation of expert evidence on behalf of Transco in one of Scotland's longest health & safety criminal trials, concerned with the **Larkhall gas explosion** in which four members of the public died. Carried out a detailed review of the UK gas mains replacement programme and its effectiveness in reducing the risk of gas explosions. (Two days in witness box.)
- Advice to an industrial company on the safety measures and environmental protection for disposal of 50 year old gas cylinders containing hydrogen cyanide.
- Advice in relation to defence to prosecutions under the **Health & Safety at Work Act**, relating to a series of accidents at Grangemouth Refinery and on two offshore installations. These cases included: production systems failures; hydrocarbon escape from offshore drain system; electric shock from switchgear under maintenance; fall of drill pipe from a drilling derrick pipe handling machine.
- Principal Researcher for a major government study of the past experience and future best practice in the procurement and **utilisation of scientific advice for policy-making**. This project includes several case studies (GM crops, food poisoning, railway bridge integrity, the Thames Barrier, chemicals in food and the workplace, etc.) and resulted in draft Guidelines for good practice.
- Expert evidence for a defendant relating to division of health & safety duties between a client organisation, their engineering consultants and a contractor, relating to a prosecution under the **Control of Asbestos at Work Regulations**.
- Expert report for a criminal defence concerning a consignment of a dangerous and volatile chemical aboard a Boeing 747 and the potential consequences to the aircraft, passengers and crew if the consignment had leaked.

- Advice and expert evidence for local authorities **prosecuting health & safety dutyholders** following serious accidents: rope access techniques for work at heights in roof voids of an exhibition centre; an accident to a fork-lift truck; a fall during erection of seating stands; fall from a cherry picker, etc. This work focussed mainly on duties under the Management of Health & Safety at Work, PUWER and LOLER Regulations.
  - Expert report for the successful defence in the **"Spiderman"** case (re: safety of tower cranes when occupied by a protester)
  - Advice to the legal team that successfully defended the managing director of a paint system contractor at Ford's Southampton van assembly plant, who had been accused of **manslaughter** following a fatal accident to an employee.
  - Provided evidence for Part 2 of the **Ladbroke Grove Rail Inquiry**, concerning the future regulatory regime and safety management in the railway industry. This work, for passenger interests, was funded by the Treasury Solicitor.
  - Advice in connection with a **planning appeal** over a new leisure development near an existing cross-country pipeline carrying a hazardous chemical.
  - Project leader, in collaboration with the Veterinary Laboratories Agency, for the development of a large-scale numerical risk model of pathways for the importation into the UK of Foot and Mouth virus and its transmission within the inland food chain to farms, and the related risk of a future outbreak of disease.
  - Development of an environmental hazard database and associated assessment algorithms for a national electricity transmission company.
  - Advice to Hong Kong's airport authority on the risks of oil spills affecting rare pink dolphins at a temporary marine terminal for aviation fuel.
  - Investigation of several civil **personal injury** cases, for example: failure of a commercial vehicle braking system, explosion of a military cooking unit during the Gulf War, electric shock to a 10 year old boy playing in a public place near an electrified railway line, fatal accident to a railway train driver while shunting, a serious fall of a customer at a petrol filling station, crushing of a driver due to a runaway lorry, chemical exposure of a worker in a metalworking factory.
  - Investigation into the alleged failure of a chemical pesticide to perform as warranted by the supplier, in support of a **commercial litigation** defence.
- 1993** Appointed an independent member of the UK Health and Safety Commission's **Advisory Committee on Dangerous Substances**, which advises the government on chemical and fuel hazards in manufacturing and transport and in end uses. The committee was responsible for reviewing UK legislation on: the carriage of dangerous goods, gas safety, pipeline safety, and the UK implementation of the EU "Seveso-II" Directive on "major hazard" industries.
- 1989** **Chief Executive of Four Elements Ltd**, a consultancy specialising in industrial safety issues.
- He was the Project Director for the Quantitative Risk Assessment carried out by Four Elements for the **Channel Tunnel**, on behalf of Eurotunnel, the operators.

- He led major studies for offshore oil platform operators, including several for **Shell Exploration and Production**, aimed at determining the optimal upgrade strategy for existing older installations, to achieve compliance with the "ALARP" principle. This work has led to contributions to the Safety Cases for these installations.
  - He was commissioned by the **Piper Alpha Court of Inquiry** to present expert evidence on the application of scientific methods of safety assessment to offshore installations. This evidence was required as part of the Court's review of the need for new technical and regulatory methods for ensuring the safe design and operation of both new and existing platforms.
- 1986** Appointed **Chief Executive of Technica Ltd**, with overall managerial responsibility for the Technica group of companies.
- 1981** **Founding member of Technica.** Originally appointed as Technical Director, he had overall responsibility for the quality and development of the company's scientific work. He was Project Manager for several major projects, notably:
- Investigation of the effects of the initial gas explosion on **Piper Alpha** and the blast resistance of the process module firewalls. This work included detailed technical analysis and the presentation of evidence at the Piper Alpha Inquiry.
  - Total Risk Analysis of the **Gulfaks A** oil and gas platform (Statoil, Norway), then the largest in the world.
  - Risk Analysis and Evidence for a Public Inquiry, for the ethane and ethylene pipelines from Mossmorran to Grangemouth (for **Esso Chemical Ltd**)
  - Project Manager of a broad range of safety engineering studies for a major new gas-condensate production platform in the UK sector.
- 1975** Joined **Cremer and Warner** (appointed an **Associate** in 1979). Initially, he worked on the prediction of the effects of accidental spills of Liquefied Natural Gas, under a contract from British Gas. Subsequently, he was project manager of a series of industrial risk assessment studies in Scotland, Australia, and the Netherlands.
- During this period, he made several appearances as an expert witness at planning inquiries addressing the risks associated with proposed industrial facilities and their compatibility with neighbouring developments.
- 1971** Research Assistant, then **Royal Society Research Fellow, Department of Mathematics, Imperial College, London University.** He developed enhanced methods for predicting the air pollution impact of new industrial plant, which were applied to a series of case studies: a radiochemicals factory, various chemical and municipal waste incinerators and an aluminium refinery. Two of these cases resulted in evidence presented to planning inquiries.
- 1968** **British Aircraft Corporation** (now BAe - British Aerospace). In the Dynamics Department, he worked on methods for calculating the response of aircraft structures to atmospheric turbulence, and the use of risk-based criteria for determining design basis structural loads from atmospheric gust statistics.