

# Eur Ing Dom Barraclough

## Managing Director

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**BEng(Hons) MSc CEng MIMechE MIET MIAgrE SIIRSM**

### Expertise

Machinery & equipment safety	Domestic & commercial plumbing systems
LV electrical systems (domestic, commercial, industrial)	Agricultural engineering (vehicles & process)
Amusement device safety and engineering	Domestic appliance (safety and fire)
Civil & criminal matters including personal injury & fatal	Industrial equipment safety

### Experience

Dom Barraclough is a chartered engineer with European professional registration. He is a corporate member of the Institution of Mechanical Engineers, the Institution of Engineering Technology (formerly the Institution of Electrical Engineers), the Institution of Agricultural Engineers (nearly 30 years) and is a Specialist Member of and sits on the Technical Committee of the International Institute of Risk and Safety Management. He practices as a consultant and as an expert witness in civil and criminal cases.

Dom is qualified and experienced in both electrical and mechanical systems including control systems. Having worked in industry for some 30 years in positions ranging from the shop-floor to senior management, his industrial experience ranges from design through manufacturing to consulting and across a wide range of sectors including automotive, manufacturing, agriculture, food processing, heavy industry and construction. He was a named inventor on 3 patents of small/medium size electromechanical drive systems. Dom has been instructed by law firms and insurers some 200 times as an expert witness in disputes, personal injury and fatality cases, including a murder for both defendants, claimants and on a SJE basis.

With regard to electrical and plumbing systems, Dom has been renovating and extending his own properties since 2003 having carried out complete designs, first fix and second fix wiring and re-wiring projects to the satisfaction of Building Control (existing and new build). He has designed and installed open vented and fully pressurised domestic hot and cold water, and heating systems in plastic and copper (successfully verified by a third party). Dom has also physically installed from kerb side to stop-cock, cold water mains leg to the satisfaction of Severn Trent Water who then made the main connection (this install involved location and modification of existing shared lead-pipe leg and conversion to single fully plastic leg). Dom has rerouted and renewed from kerb side to cut-out, new 100A electrical incomer to the satisfaction of Western Power who completed the joint and final meter connection after inspection.



## Professional Qualifications and Memberships

Eur Ing registration with Engineering Council and FENAI

Chartered Engineer registration with Engineering Council

Member of Institute of Mechanical Engineers (IMechE)

Member of Institute of Engineering Technology (IET)

Member of Institute of Agricultural Engineering (IAgrE)

Specialist Member of International Institute of Safety and Risk Management (IISRM)

# Selection of Experience

## Industrial Engineering

### Paper Making

Acted as an Expert Witness in a prosecution case involving serious injuries to a technician while commissioning a new CE marked machine in a paper making factory. The issue was an overridden guard interlock.

### Metal Manufacture & Fabrication

Acted as an Expert Witness in a prosecution case involving near fatal injuries when an operator climbed into a large 20-year-old steel press. The issue was safe isolation (electrical and hydraulic).

Acted in a fatality involving metals smelting process using lifting operations and hazardous substances.

### PPE manufacture

Acted as an Expert Witness in the prosecution and civil cases involving an operator with hand injuries from using a PPE printing machine with a CE mark and manufactured in China. The issue was inadequate guarding.

### Food packaging

Acted as an Expert Witness in a personal injury case involving a technician having his head crushed in a meat cryogenic packing machine while making repairs. The issue was communication and safe isolation.

### Rubber manufacture

Advised a US attorney on a case where a US laboratory worked had hand amputated by a rubber calendaring machine manufactured in the UK before the 1992. The issue was what standard

should the machine have met before being exported as a “used” machine.

## Leisure

### Amusement Devices

Acted as the assessor, project manager and sign-off authority on a number of amusement devices including multi-train roller coasters, pirate ships, and smaller rides.

### Giant “Zorb” plastic ball

Acts as an Expert Witness in a case where a couple were left with life changing injuries when they rolled down a hill in a giant plastic ball for fun. The issue was the management and control of persons riding.

### Carousel ride

Acted as an Expert Witness in a personal injury case where the horse on an old carousel ride detached while a person was riding. The issue was maintenance of the mechanical connections.

### Water ride

Acted as an Expert Witness in a personal injury case where a guest suffered injuries on a powered water ride. The issue was operator training.

### Adult toys

Acted as an Expert Witness in a personal injury case where a couple were injured while using CE marked adult toys & equipment. The issue was misuse.

### Cycling injuries



Acted as an Expert Witness in a number of cycling incidents (including mountain, road and BMX) where personal injury has been alleged. The issues range from rider error to mechanical failure caused by design and manufacture.

### **Stage doors**

Acted as an Expert Witness in case where two band members were killed when a large, nearly new panel door dropped expectantly – trapping one. The issue was a single line failure in the suspensions system and design duty.

### **Swimming pool**

Acted as an Expert Witness in case a holiday maker alleged to have received an electrical shock from the pool at the hotel in Barbados where she was on holiday. The issue was the installation and maintenance of the submerged pools lights.

### **Family Pub**

Acted as an Expert Witness in case where a child received an electric shock from a motorised awning at a family pub. The issue was the standard of earth bonding and installation of the motor.

## **Agricultural Engineering**

### **Tractor and combine fires**

Acted as an Expert Witness in a few cases of fire in tractors and a combine harvester where new or nearly new equipment has been destroyed by fire. The issues were faults in wiring and hydraulic systems and overheating bearings.

### **Equipment condition**

Acted as an advisor to assess the delivery condition, estimated value and operability of

agricultural equipment, including balers, combine harvesters and telescopic handlers.

### **Maintenance safety**

Acted as an Expert Witness in the prosecution of a large company when a driver-fitter was fatally crushed while carrying out repairs on fertiliser spreader. The issues were electromechanical and procedural.

### **Overhead power line**

Acted as an Expert Witness in the prosecution of a large arable farm when a worker received a near fatal electric shock and lost limbs when irrigation pipes made contact with the 11kV overhead power line. The issue was training and misbehaviour.

## **Domestic**

### **Appliance Fires**

Advised and acted as an Expert Witness in a number of cases where tumble dryers, washing machines and dishwashers have been alleged to have caused a fire. The issues range from electrical to mechanical faults.

### **Workmanship**

Acted as an Expert Witness in a case where the resident of a high-end flat in a Nottingham development was in dispute with the builder/owner. The issue ranged over quality and compliance with good standards and BS7671.

### **Electrical Fires**

Acted as an Expert Witness in a case where the central heating and hot water system (the diverter) valve caused the airing cupboard to alight and extensive fire damage to the house.



Acted as an Expert Witness in a case where the MCB installed in a domestic consumer installed in a care home was fault and case a fire in a resident's flat.

### **Electric shock**

Acted as an Expert Witness in a of number personal injury cases where domestic appliances, such as kettles and toasters have been alleged to have caused electric shocks. The issues range from electrical in-use faults.

## **M&E**

### **Cold water systems**

Acted as an Expert Witness in a number a case of failures in copper (soldered and push-fit) and plastic fittings (Wavin, Hep2O and JG) leading to water escapes and flooding.

### **Water filtration**

Acted as an Expert Witness in a case where a large water escapes into the CPS building was caused by the materials failure on the thread of a filtration system.

### **Electrical fires**

Acted as an Expert Witness in cases where older electrical systems have caused fires.

### **Electrical shocks**

Acted as an Expert Witness in a number of cases where tradespeople have been injured as result of receiving electric shocks in schools, shops and domestic premises.

# Employment History



## Finch Consulting Limited

### Managing Director

**2016 - Present**

Working with the team to leading the strategic growth of engineering expert witness, consulting learning and legal services across the UK and elsewhere.

## HSEC RHMA Expert Witness Services and Consulting Services

### Managing Director

**2012 - 2016**

Working as a consultant and expert while growing the team to transform the business to put in place the foundations for growth. Leading the development of services delivered into the UK.

## Health Safety and Engineering Consultants Limited

### Director

**2009 - 2012**

General management and responsibility for engineering quality.

### Principal Engineer

**2008 - 2009**

Responsible for own cases and development and structure of the engineering consulting team. Grow existing revenue streams and profitability. Develop

new business areas. Responsible for project commercials and delivery.

## R H Mitchell Forensic and Expert Witness Services

### Associate

**2009 - 2012**

Working as an expert witness on a range of engineering matters including disputes, personal injury claims and fatalities.

## A&S Group Limited

### Group Technical Development Manager

**2001 - 2008**

With overall group technical responsibility. Development of new products including compliance and testing. Working closely with clients, including MoD, FCO and blue-chips to develop specifications. Implementing group wide engineering standards. Introduction of H&S management systems and ISO9001 QMS.

## Engineering Project Services Europe Ltd

### Design Director

**1997 - 2001**

I worked with my team on various diverse electro-technical machine and product engineering design projects for clients from concept through detail design to manufacture. I was a named inventor on two patents (GB2350863, GB2356894). I helped develop world class new large aluminium



investment casting and small plastic component rapid prototype techniques for production ready parts with Nottingham Trent University. I project managed to setting up of a 50,000sqft manufacturing facility.

## Securedrive Systems Ltd

### Technical Director

**1999 - 2001**

Designed and brought into production my new high duty, rapid speed large door drive and control system. I was named as inventor on patent (WO0155548). I set up 15-person manufacturing facility and took the product to market, including the US. I developed a new planetary gearbox, a new range of induction motors, an electromagnetic braking system and the single and three phase control systems. Involved in writing of BS EN 13241 for Industrial, commercial and garage doors and gates under the Machinery and Construction Products Directives.

## Adwest-Rearsby Automotive Ltd

### Product Design Engineer

**1996 - 1997**

I designed automotive driver control systems in plastic and steel for use in Toyota, Nissan, Rover and Land Rover passenger cars. I worked on a crash impact safety system using ejector seat bolt technology. I produced engineering drawings and models and helped bring products into high volume manufacture. I worked closely with clients, the production and manufacturing teams. I helped introduce plastic pedal technology in cars. I set up an automotive safety systems research and

development centre from nothing to consider developments in automatic driver safety systems.

## Thorite Power International Ltd

### Design & Development Engineer

**1994 - 1996**

I set up their first dedicated design and development department. I introduced CAD. I developed a new range of conveyor drives up to 22kW. I carried out applications engineering for supermarkets, factories, baggage handling, quarries and mines. I designed gear helical and planetary boxes (plastic and metal), oil sealing systems, motors and associated electrical systems. I designed and built development and production test rigs. I worked closely with the factory shop floor and component suppliers.

## Fletcher-Harrison Ltd

### Design Engineer

**1992 - 1994**

I produced scheme designs and bespoke equipment design modifications for high-speed packaging machinery and packaging lines in sites at Guinness, Chivers, Buxton Waters, CPC, etc. I worked closely with Italian, German and French manufacturers. I was actively hands-on with the projects to install and commissioning including factory and site acceptance testing. I developed a remote packaging machine condition monitoring system using modems and statistical process techniques.



## Benford Limited (now Terex)

### Design Engineer

1991 - 1992

I worked within the electrical and controls department developing electro-hydraulic and electronic control safety systems for cherry pickers - as a consequence of a fatality, I was tasked with developing a safety system using PLC and relay logic to protect drivers from unexpected movement due to the hydraulic system. I was involved with the safety and type testing of scissor lifts, in particular tilt protection systems.

## Various trainee mechanic positions

Up to 1991