



ROAD TRAFFIC COLLISIONS & VEHICLE FIRES

Providing forensic engineering, scene and vehicle examination, and collision reconstruction services to identify the causes of a collision or thermal event.

www.hawkins.biz

Biomechanics | Collision Reconstruction | Component Failure | Computer Modelling
Helmet Usage | Highway Engineering | Human Factors Analysis | Seatbelt Analysis
Scene Examination | Surveying | Vehicle Examination | Vehicle Fires | Video Analysis
Visibility & Conspicuity Analysis



Established in 1980, Hawkins provides specialist forensic root cause analysis and expert witness services to insurance, risk management, and legal sectors, working with both claimants and defendants. We also support government agencies, the Ministry of Defence, local authorities, police, and vehicle and component manufacturers.

With a recognised and growing global presence, we have over 150 experts providing worldwide coverage from offices in Europe, MEA, and Asia, and key locations across the UK & Ireland.

Our teams include highly experienced forensic scientists and engineers specialising in over 70 disciplines, including mechanical, electrical, civil, structural, and highway engineering.

We advise and assist at any stage of an incident, from pre-loss prevention and risk assessment to root cause analysis, remediation advice, and expert witness services.

“Clients come back to Hawkins because of our honesty and integrity. Our subject matter experts have sound technical knowledge and expertise, married with a real commercial awareness of what our clients need. Hawkins provides a rapid response, giving timely, accurate advice and communication of the evidence in a way our clients can act upon.”

Dr Andrew Prickett, Managing Director, Hawkins

Our detailed engineering knowledge of how vehicles operate and behave is invaluable when understanding how a collision occurred.

Hawkins has the largest group of Road Traffic Collision investigators in the UK, with decades of experience between them. Our investigators can carry out a desktop analysis, as well as a full reconstruction, enabling an accurate assessment of liability.

We provide high quality reports to assist our clients in understanding the technical issues of a case. Our reporting is flexible, ranging from consultation, to letters providing a brief overview, to full analysis and court-compliant reports supporting legal action, in order to best suit our clients' needs.

All of our investigators are trained to present evidence in Court.



What we do



ROOT CAUSE ANALYSIS

Scientific investigation into all aspects of an incident to determine what happened, why and in what sequence.



PRE-LITIGATION ADVICE

Independent and impartial technical advice to assist Counsel during all aspects of litigation.



EXPERT WITNESS SERVICES

Independent and impartial technical advice, including quantum & delay services to assist Counsel during all aspects of litigation.



POST-FAILURE ADVICE

Consultancy advice to reduce, mitigate and prevent risks associated with similar events happening in the future.



MAJOR & COMPLEX LOSS

Global resources and multidisciplinary teams, armed with the knowledge, equipment and facilities to manage and investigate major and complex incidents.

Levels of Reporting Available

Our reporting is flexible and can be tailored to your needs, depending on the scale and urgency of the investigation. Our services range from a free consultation through to a full investigation including a court-compliant report for the support of legal action.

1 FREE CONSULTATION

We are always available for an initial, confidential discussion with no commitment and at no charge.

3 COURT REPORTS

The preparation of reports in accordance with the requirements of Part 35 of the Civil Procedure Rules, its associated Practice Direction and the Guidance for the Instruction of Experts in Civil Claims 2014.

2 PRELIMINARY REPORTS

Initial advice, often at an early stage when evidence is incomplete. These reports often address focussed questions, for example, to determine the 'tipping' point in relation to avoidability, to assist with considering the merits of a case/liability.

4 PHASED APPROACH

Where your case is large, complex or the scope not easy to define, we often recommend a phased approach.



We Investigate...

COLLISION RECONSTRUCTION

Collisions are invariably multi-factor events. Witness accounts may conflict or be inaccurate. Hawkins' investigators analyse the scene data and the physical constraints of the collision location, as well as the incident vehicle, to form conclusions based on physical evidence.

SCENE ANALYSIS

Scene analysis, if undertaken very soon after the collision, can result in the identification of important physical evidence. This can lead to an early understanding of the circumstances surrounding a collision. In addition, scene attendance provides the investigator with the opportunity to: consider the limits of sightliness, make measurements, and take photographs to assist both clients and Courts with understanding the location.

VEHICLE EXAMINATIONS

Whether the case involves a car, bus, heavy goods vehicle, motorcycle, farming equipment, or a bicycle, Hawkins' engineers consider various vehicle attributes during an examination, such as: tyre performance, vehicle stability, vehicle defects, vehicle condition/damage, event data recorder information, tachograph data, and a vehicle's service history.

VIDEO ANALYSIS

Through frame-by-frame analyses of collision footage from closed circuit television, dashcam, or other portable recording devices, an investigator can present a logical chronology of events, determine precise speeds, positions and times, by which to evaluate the relative positions of the respective parties in the moments prior to, during and after a collision.

COMPUTER MODELLING

Simulation of the collision is undertaken by calculations performed both manually and by computer. Hawkins uses specialised computer software to analyse the pre and post impact trajectories of vehicles, to reconstruct the visibility available to the driver and witnesses, to prepare plans from photographs and survey data from the scene, and to carry out any other analyses that assist in the understanding of an incident.

HIGHWAYS ENGINEERING

Road traffic collisions can result from poor road layout, construction, signage or condition. Hawkins has the expertise to consider these factors and how they might have caused or affected a collision.



TYPICAL STAGES IN AN INVESTIGATION

PRELIMINARY EXAMINATION

If Hawkins is instructed early enough, we always prefer to examine damaged vehicles as soon as possible. Generally, this means whilst still under Police retention. Often only a visual examination is permitted at that stage, but it can be very important to see a vehicle before there is a risk of physical evidence deteriorating.

We can also make a preliminary examination of a scene, hopefully before changes are made, or whilst some physical evidence can still be seen. Once the Police plans, photographs, laser scans, and other information become available, we can move on to a detailed analysis.

In many cases we are instructed months, or even years, after a collision has occurred. By that time, it is unlikely (but not unknown) that the vehicles will still be available. The scene might also have been altered. The starting point, in such cases, is usually to use and analyse the physical evidence gathered by the Police.



QUESTIONS WE ARE FREQUENTLY ASKED

Whilst every investigation is different, there are a number of questions that investigators of road traffic collisions are often asked:

- What was the speed of a vehicle before a collision?
- What lights were illuminated?
- What was the driver's Perception-Response time?
- Was a person wearing a seatbelt?
- Did the supplemental restraint systems function properly?
- How deep was the water on a road in heavy rainfall?
- Could something (or someone) have been seen in time to avoid a collision?
- From what speed was the collision avoidable?
- Was there a defect with the vehicle that caused or contributed to the collision?

If you wish to make an enquiry or instruct us, please contact us by telephone or via our enquiries inbox and you will be put in touch with the relevant expert (see contact details on back cover). Alternatively, you can contact any of our experts directly – their details are on the following pages.

Our Experts



Adam Barrow

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Adam is an expert in forensic collision investigation, operational safety and biomechanics. He has extensive experience attending live collision scenes, applying forensic techniques to reconstruct incidents and analysing injury biomechanics, vehicle crashworthiness, and safe-system failures. Adam led the UK's in-depth collision research programme and has published peer-reviewed research papers that contributed to international safety regulations and policy.



Richard Baker

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Richard coordinates Hawkins' Road Traffic Collision team and he is a Chartered Mechanical Engineer. He routinely examines vehicles and surveys collision scenes. He deals principally with complex cases, specialising in particular in collision reconstruction that involves detailed video analysis. Richard has given expert oral evidence in Criminal and Civil Court.



Inigo Beckett

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Inigo joined Hawkins after graduating with a First-Class Masters Degree in Mathematics from the University of Warwick. Inigo works alongside both the Digital Forensics and Road Traffic Collision Investigation teams, providing assistance with: data acquisition and analysis ('black-box', telemetry, mobile devices, crash data); forensic photogrammetry; video analysis; 3-D modelling; and the use of GIS software.



John Camplin

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John is a physicist by training and comes from a materials science background in the defence industry. Since joining Hawkins, he has gained comprehensive experience of road traffic collision reconstruction and associated engineering failures. He has particular expertise in incidents involving head impact forces, head protection (helmets) and passenger biomechanics. John has given expert evidence in both Criminal and Civil Court.





Ross Clarke

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Ross is a Chartered Mechanical Engineer who prior to joining Hawkins, had his own company which provided crash safety consultancy services to OEM's, developing their new and existing vehicles crash safety performance. Ross has many years of experience conducting and investigating vehicle collisions across the world. He also has experience in investigating the causes of various mechanical failures through component tests, and in vehicle homologation programmes.



Luke Collins

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Luke Collins started his career investigating vehicle fires, and had completed over 300 investigations by the time he joined Hawkins. Luke has also expanded into investigating fires and explosions in both domestic and commercial properties, as well as on ships.



Gavin Dunn

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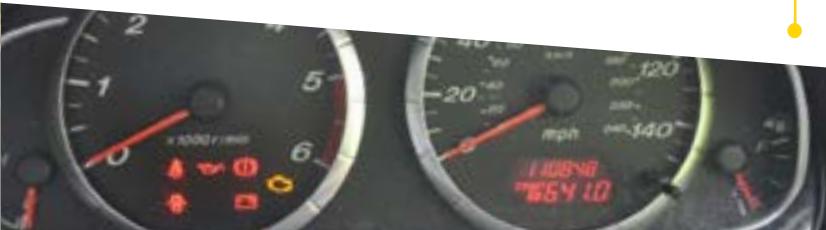
Gavin is a Chartered Mechanical Engineer and has worked in the field of road traffic collision reconstruction since 2010. He has experience of examining collision scenes, vehicles and vehicle components, as well as experience in the analysis and interpretation of digital data such as video recordings or onboard vehicle data. Gavin has investigated a range of collision types and has given evidence as an expert witness in court numerous times.



John Holland

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John is a Chartered Mechanical Engineer with over 20 years' experience. Before joining Hawkins, John worked as an automotive design engineer in the military and offroad specialty vehicles industry. He has specialist experience in incidents involving all-terrain vehicles, as well as incidents involving load loss from, or the rollover of, large goods vehicles. John also investigates mechanical failures and incidents involving vehicle-mounted lifting equipment. He has given expert evidence in Court.





Mike Hopwood

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Mike is a Fellow of the Institute of Highway Engineers and is able to assess and comment on numerous aspects relating to the highway environment, including drainage and gritting. Before joining Hawkins, Mike's local authority role was to assess if, and how, aspects of the highway layout or road conditions might have caused or contributed to a collision. Mike has given evidence in Court throughout the UK in both criminal and civil matters.



James Kingham

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James is a Chartered Mechanical Engineer with over a decade of experience. Since joining Hawkins, he has investigated a wide range of cases including multi-vehicle and pedestrian collisions, as well as mechanical and tyre failures. James specialises in incidents involving large goods vehicles and agricultural equipment, and has extensive knowledge of hydraulic and pneumatic systems. James is experienced in analysing CCTV footage, conducting scene surveys, and examining vehicles. He has given evidence as an expert witness in Court proceedings.



Charles Murdoch

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Before joining Hawkins, Charles worked in failure investigation for Rolls Royce. Charles has expertise in road traffic collision reconstruction, particularly where the analysis of CCTV is required. As a keen motorcyclist, a large proportion of Charles' work includes protective headgear cases and two-wheeled vehicles, whether working on behalf of a claimant or defendant.



Siobhan O'Connell

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Siobhán is a Forensic Collision Investigator with over eight years' expertise in road traffic collisions and safety research. A first-class MEng graduate in Medical Engineering, she has worked at the Transport Research Laboratory and with Hampshire Constabulary, specialising in collision reconstruction, CCTV analysis, injury biomechanics and vehicle safety. She has given evidence as an expert witness in Court proceedings.





Robert Taylor

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Robert is a Chartered Mechanical Engineer who has previously conducted track based whole vehicle test, development, and certification programmes on a wide range of automotive systems at Millbrook Proving Ground. He developed a specialisation in Advanced Driver Assistance Systems (ADAS), and completed a variety of programmes for Autonomous Emergency Braking (AEB), Lane Support Systems, and other active safety features.



James Wade

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James has a background in automotive engineering and vehicle design. In 2010 he set up his own practice, specialising in the maintenance, modification, and restoration of classic cars. Since joining Hawkins, he has investigated numerous road traffic collisions using both traditional reconstruction methods as well as more modern techniques, such as CCTV analysis, vehicle crash data and the use of 3D laser scanners.



Richard Woodward

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Richard is a Mechanical and Materials Engineer who previously worked within the automotive industry. He has experience in the design, assembly, and repair of multi-material vehicle structures. Richard also has a wealth of experience relating to the design, maintenance and repair of agricultural equipment. Over many years he has developed a practical understanding of the challenges faced by operators of agricultural equipment, such as avoiding fires and mechanical failures.



Hawkins' Expertise

With a recognised and growing global presence, we have over 150 experts providing worldwide coverage from offices in Europe, MEA, and Asia, as well as key locations across the UK & Ireland. Our expertise covers a vast number of specialist areas including:

ACOUSTICS & AUDILOGY

Our experts assess and advise on acoustic design in the planning stages, and provide mitigation strategies post-construction in the event of a noise dispute.

ARCHITECTURE

We investigate building defects to determine whether design or workmanship is the root cause. With experience in many sectors and across all RIBA stages from inception to occupation, we can provide advice tailored to your project.

THE BUILT ENVIRONMENT

Our civil, structural, geotechnical and fire engineers provide expert investigation of defects and failures in the built environment, including water ingress, structural collapses, storm damage and personal injuries, especially on construction sites.

CHEMISTRY & CHEMICAL ENGINEERING

Hawkins' team of highly qualified and experienced chemists and chemical engineers provide expert opinion on problems associated with chemical processes in a wide variety of industries, including: post incident investigation, goods handling, environmental concerns, hazardous substances and personal injury.

CONTAMINATION

Our team of highly qualified and experienced chemists can investigate a wide range of contamination and spillage incidents.

DIGITAL FORENSICS

Hawkins experts collect, authenticate and preserve original evidence. We discover the source of a digital event or attack, how it occurred, and what information may have been lost or compromised.

ELECTRICAL

We investigate incidents including failures and injury involving most types of electrical equipment, from micro-electronics and domestic electrical appliances through to high voltage generation and distribution.

ESCAPE OF WATER, GAS, OIL AND OTHER FLUIDS

We can provide system failure analyses for incidents involving all fluids and gases in industrial and domestic settings with onsite and laboratory investigations.

FIRE & EXPLOSIONS

As a leader in forensic fire investigation, Hawkins has the necessary knowledge and experience to investigate the full scale of losses globally, and advise on recovery, liability and risk management.

FIRE ENGINEERING

Hawkins has the necessary competencies to advise on fire engineering matters including compliance with fire safety legislation and guidance, investigation of fire spread and building fire safety design, construction and management.

FRAUD

We compare physical evidence with witness accounts to establish if the evidence is commensurate with a suggested sequence of events or actions. This applies to both small and major losses.

HYDROLOGY

Our expert hydrologists and engineers have years of experience identifying the cause(s) of complex flooding incidents.

MARINE INCIDENTS

We assist on a wide range of incidents including agricultural cargoes, liquefaction, fires, explosions and chemical contamination.

MATERIALS

From medical implants to satellites, our experts are on hand to establish the cause of failure of manufactured items.

MECHANICAL

Losses often involve the failure of multi-component mechanical systems. We have the knowledge and experience to identify the cause, no matter how complex.

PERSONAL INJURY

We provide independent and expert assistance with all types of personal injury, including specialised and complex areas like slips, trips and falls, and noise-induced hearing loss.

PLANT PATHOLOGY

At Hawkins, plant pathology encompasses agricultural, horticultural, forestry, marine and contamination claims. Our experts are experienced in investigating the causes of plant diseases, crop failures and spoilage of fresh produce and agricultural cargoes.

POWER & ENERGY

We investigate all aspects of failures in traditional thermal power, oil and gas, and renewable energy sources. As well as incidents such as electric shock, gas leaks, power failure, over-voltage, equipment failure and poor design and maintenance.

PROCESSES

Our engineers help identify the cause of a problem and advise on liability and future prevention.

PRODUCT LIABILITY

We are experts in the field of product liability and often deal directly with UK Trading Standards offices or similar statutory bodies.

QUANTITY SURVEYING

We provide cost consultancy, dispute resolution, and quantum & delay expert witness services through our two specialist subsidiaries. Services include insurance reinstatement valuations, pricing proposed works assessing the quantum of claims, and the impact of delays.

RAILWAYS

We have investigated incidents including derailments, unintended runaways and accidents at level crossings.

ROAD TRAFFIC COLLISIONS

Our investigators identify all contributory factors and analyse issues such as vehicle speed, visibility, human factors, CCTV, road positioning, weather, vehicular faults and damage assessments.

VEHICLE, PLANT & MACHINERY

We investigate fires and failures involving all types of vehicles and plant. We routinely review designs and maintenance practices to provide recommendations to our clients.



QUANTITY SURVEYING SERVICES

We provide market leading Quantum & Delay expert witness services through our specialist subsidiaries A Lamb Associates (ALA) and Morham and Brotchie Partnership (M+BP).

ALA

Our team is comprised of highly qualified industry leading experts. ALA has considerable experience across all major building and engineering sectors, with particular expertise in cross country pipelines, energy and major infrastructure projects. Blue chip multinationals, Tier 1 contractors and specialists all turn to ALA for reliable authoritative and accurate expert opinion.

M + BP

M+BP are an established Chartered Professional Quantity Surveying practice, whose clients include individuals, corporate bodies, insurance companies, and trusts. M+BP provide QS services for all sectors with specialism in listed historic building projects and one-off complex builds. M+BP prepare bespoke cost plans to suit clients, funders, and insurance bodies, to provide the best service and most accuracy.

Our team of specialist experts provide Expert Quantum and Expert Forensic Delay Analysis and have a wide range of experience, including:

- One-off complex projects for high-net-worth individuals
- Residential builds (new/alterated/extended)
- Visitor centres and museums
- Whisky distilleries
- Hospitality, including restaurants, theatres and cinemas
- Commercial fit out
- Education, government, and local authority

SERVICES

Our team of expert in-house Quantity Surveyors provide a range of services including:

INSURANCE REINSTATEMENT VALUATIONS

Our experienced team provides reinstatement valuations, with expertise in historic or listed properties. These often feature unusual or difficult to price items, such as masonry vaults, elaborate fireplaces, and traditional building methods. Using generic rates to calculate these valuations is seldom best practice, which is why M+BP advocate providing detailed costings when undertaking these exercises

PRICING PROPOSED WORKS

Our experts provide support pricing proposed works. This includes pricing proposed remediation options so that an informed decision can be made on the most cost-effective solution.

ASSESSING THE QUANTUM OF CLAIMS

We investigate and assess the reasonableness of claims received. Our experienced team will review all costs to determine if costs have been reasonably and properly incurred. We assess whether a reasonable procurement process has been followed, whether rates represent market value and whether work pricing reflects the scope. We are able to make adjustments for betterment, inflation or other relevant matters.

THE IMPACT OF DELAYS

The duration of a project can have a significant impact on the amounts claimed. Our experienced team of Forensic Planners can assess the cause of any delays to progress, determining whether all costs claimed are properly due.

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