Forensics in focus

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Introduction - Professor James Lygate

Managing Risk the IFIC Forensics' Way

Four persons lost their lives recently in a tragic accident on an entertainment ride in Australia. Such events have been much in the news recently.

According to the judge in the Alton Towers roller coaster incident of 2nd June 2015 which trapped 16 people and seriously injured four, the company missed a "golden opportunity" to make crucial changes to its health and safety systems. As reported in the press after the inquest, the court was told that:

- Staff had not seen there was a stationary carriage on the track;
- Staff had overridden the computer that controlled the ride, sending a carriage around the track, where it smashed into the stationary carriage;
- Those on the ride were trapped for up to five hours before they could be rescued;
- Systems in place to control the ride were 'not good enough' and Alton Towers accepted extra measures could have been taken to guard against the risk.

On 27th September the BBC reported that Alton Towers operator Merlin had been fined £5m for the crash on the Smiler rollercoaster. Sentencing, Judge Michael Chambers QC described the crash on the £18m attraction as a "catastrophic failure" and "This was a needless and avoidable accident in which those who were injured were lucky not to be killed".

I was struck by the fact that the opportunity to investigate an earlier accident had been missed. What might be termed "near-miss" events warrant rigorous forensic investigation.

IFIC Forensics recently exhibited at the AIRMIC Enterprise Risk Management Forum in London. Risk Management is vital to any organisation. Risks associated with brand, reputation, service delivery, finance, regulation or legislation can - if not managed - be the cause of catastrophic incidents from which organisations cannot recover.

The **Inherent Risk** are those risks which result from any activity and the **Residual Risk** remains after measures to mitigate and control the risk have been taken.

Risk Assessment is at the very core of the Health and Safety at Work Act (1974). IFIC Forensics' Risk Management solutions identify and help to address inadequacies in risk controls particularly where organisations have become risk blind being inured to the risks they take: e.g. control inadequacy.
We are well known for our 40+ years of working in the insurance claims sector; a sector that essentially exists not merely to offer risk mitigation but also because of the very concept of risk. If there were no risks, there would be no need for insurance.

Consequently, because of our decades-long history in insurance claims work, we have vast experience in identifying, analysing, managing and mitigating risks - the ideal partner for an organisation's Risk Management processes and assurance.

IFIC Forensics has developed a portfolio of Risk Management solutions to support organisations in the establishment of adequate safety systems. These products include:

- **Risk Assessment Audit:** Ascertaining if Risk Assessment methods are adequate to accurately assess risk;
- **ALARP Check:** Ascertaining if duty holders have shown how risk actually is "as low as reasonably practicable";
- **Near Miss Investigation:** Ascertaining what happened, why and how, if barriers to occurrence were robust and/or if they need to be reinforced;
- **Post Incident Investigation:** Through examination, assessment, conducting interviews and evidence collation, the presentation and reporting of findings.

In January 2004 a fire broke out in the Rosepark Care Home claiming the lives of 14 frail, elderly persons. A Risk Assessment Audit would have identified that the risk assessment had not been undertaken by a competent person in a competent manner. An ALARP Check would have suggested an alternative to permitting door closures to be defeated so that the doors did not close automatically in the fire. It would have identified that staff investigated fire alarms first before calling the Fire Service which led to delayed attendance.

I hope you enjoy this Winter 2016 issue of Forensics in Focus and may I thank you, our clients, for your loyalty and wish you the Compliments of the Season.

THE SCIENTIFIC METHOD

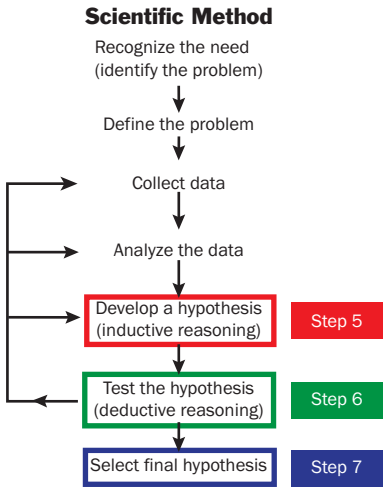
Develop and Test a Hypothesis and Reach a Conclusion

Eva McKiernan - Best Practice Series

After collecting and analysing data for the investigation the next stage is to develop a hypothesis and test this hypothesis (Steps 5 and 6 of the Scientific Method).

When these two steps have been completed, a final hypothesis is selected and a conclusion reached (Step 7).

Step 5: Develop a Hypothesis



Based on the data analysis the investigator produces a single hypothesis or multiple hypotheses to explain their observations and information collected at the scene; which can include origin, cause and spread of the fire. This process utilises ***inductive reasoning***. This hypothesis is a "working" hypothesis to be tested.

Inductive Reasoning

NFPA 921 Definition:

"The process by which a person starts from a particular experience and proceeds to generalizations. The process by which hypotheses are developed based upon observable or known facts and the training, experience, knowledge, and expertise of the observer."

The working hypothesis can rely on a wide spectrum of factors.

Source: Icove, D.J., DeHaan, J. D., Forensic Fire Scene Reconstruction, 2nd Ed, Pearson Brady Publications, Upper Saddle River, NJ, 2009

The investigator should rely on his/her own knowledge, training and experience to evaluate the data.

Step 6: Test the Hypothesis

The investigator uses deductive reasoning to test the hypothesis based on previously known facts.

Deductive Reasoning

NFPA 921 Definition:

"The process by which conclusions are drawn by logical inference from given premises.

The information should be compared to:

- All other known facts;
- Body of established scientific knowledge;
- Relevant fire test data;
- Published scientific research papers from established sources;
- Data from conducting experiments.

Comparison with scientific data should be within the established parameters of the published information and citation should be included.

Testing in this manner results in elimination of other reasonable hypotheses which are not proven by the data, modification of the working hypothesis if required and establishment of whether additional data should be gathered to inform the hypothesis.

If a hypothesis cannot be conclusively eliminated through testing it should be considered viable. If a single hypothesis which uniquely fits with the data is not identified, then the issue must be undetermined.

The inability to refute a hypothesis does not make it true, rather additional information should be gathered to test the hypothesis. Again if this occurs the issue must be undetermined.

Hypothesis Testing Pitfalls

No hypothesis can be fully formed or tested until data has been gathered and analysed. To do so could introduce presumption on the part of the investigator as to the origin and cause and the development and spread of the fire.

The following are pitfalls which the investigator can fall into if the gathering and analysis steps are not adequately undertaken.

Expectation Bias involves reaching a conclusion without having taken all the available relevant data into account. If the investigator allows this premature conclusion to affect how they continue to conduct their investigation they will not be able to reach a conclusion which is scientifically valid.

The investigator can then ignore evidence which they consider does not support their hypothesis.

Confirmation Bias occurs when the investigator tries to prove the hypothesis with the available information, i.e. if the facts fit a single hypothesis the investigator ceases to evaluate whether these facts can also fit an alternative hypothesis. Therefore, alternative hypotheses are discounted before they are tested or contradictory data is not evaluated sufficiently.

Step 7: Reach a Conclusion

The investigator should select a final hypothesis which has been robustly tested through the steps of the Scientific Method. The working hypothesis must be consistent with the information gathered and analysed to be presented as a conclusion or opinion of the investigator.

It is important that all information which is gathered and tested during an investigation is done so by competent investigators.

IFIC Forensics has a wealth of knowledge and backgrounds accessible through their in-house investigators.

Additional sources of information and expertise are available through their skilled consultants in areas which include Electrical, Oil & Gas, Nuclear, Batteries, Fire Safety Engineering and Metallurgy. Visit our website to view out experts at http://www.ific.co.uk/expertcat/our-experts/

Fire Testing facilities are also available to IFIC Forensics through the University of Edinburgh BRE Centre for Fire Safety Engineering http://www.fire.eng.ed.ac.uk/

IFIC's Electrical/Electronic Specialist, Marc Dekenah, Averts a Fire in His Own Home!

I became aware of the unmistakable odour associated with electrical burning, but could not identify the source. The dishwasher was running at the time, but this was (using a thermal imaging camera) discounted as the source.

What was concurrently noticed was our Indesit 'BAN 12 NF' fridge/freezer making an unusual noise distinctly linked to '50 Hz'. The first suspect was the motor run capacitor; the appliance was the correct make, and the correct age for this to happen. The capacitor did still appear 'normal' (*the case was not distorted). With electronic testing, though, I found it had lost connection internally and had, indeed, failed.

To say my nerves felt a decided twinge is an understatement as incendive capacitor failures is an industry wide problem, and has been, and still is the central subject in many Court cases involving white goods. From my experience, I would place capacitors as the second most probable cause of fires in white goods (with poor or loose connections, including those on the printed circuit board, being first).

Instead of just simply replacing the capacitor and discarding the failed one, I decided to set about forensically examining the old capacitor to see if it would further augment my already extensive understanding of capacitor failures.

Microscopic X-rays are my de facto first action when analysing capacitor failure. The point of failure revealed itself after careful scrutiny. Dissecting the capacitor verified the failure, and I was able to attribute the failure to nothing other than poor manufacture (the Schooping was not properly bonded to the edge of the film).

So why are capacitors used? It is the compressor that prescribes whether a capacitor is needed or not. The answer, however, is not as simple as dispensing with 'capacitor type' compressors and using only non-capacitor types. Those units using capacitors are more energy efficient than those without, and 'green' consumers drive manufacturers to use the capacitor types.

Marketplace economics further governs manufacturers to shave off every last penny from manufacturing costs. Appliance manufacturers transfer this economic pressure to the individual component manufacturers, of which capacitor manufacturers are one. As component manufacturers are not in the same position of transferring economic pressures, component cost reduction manifests as reduced quality in raw materials and/or curtailed manufacturing techniques.

Polypropylene is the predominant raw material of such capacitors but is only a relatively stable material. It degrades over time and is the fundamental reason for the failure of such capacitors. Usually the capacitor fails 'gracefully', but every-so-often the failure causes a thermal 'runaway' process within the capacitor; the electrical equivalent of a melt-down. Manufacturers are aware of this and encase the main capacitor in a flame retardant epoxy in the hope of containing the failure.

There are times the failure of the capacitor can cause the molten polypropylene to be ejected out of the casing. One of the dangers with polypropylene is it is extremely flammable and self supports combustion. Once ejected from the main casing of the capacitor, the flame retardant epoxy is no longer in place to retain or smother the flame, and the polypropylene is free to burn unhindered.

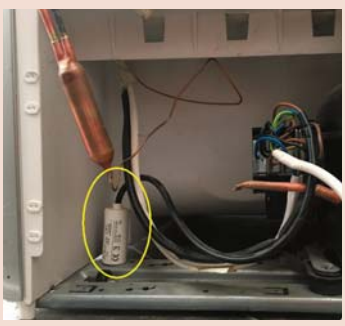
The next danger is the insulation of such a fridge/freezer is 'expanded polystyrene foam' (similar to the aerosol type used to fill holes in walls). It is even more flammable than the polypropylene and even if the polypropylene fire is small, it has the potential to ignite this insulation material that surrounds the appliance.

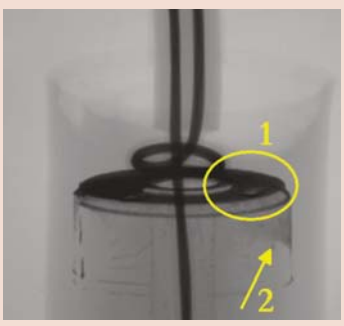
The answer is, however, a simple one.

Most capacitors used in domestic products are referred to as "Protection Class 0" i.e. there is no inherent safety built into the capacitor. For only a few pennies more, these can be replaced with "P2" types housed in aluminium cans. These also incorporate a 'disconnect' feature that senses the capacitor is in failure mode – such a failure produces copious quantities of gas, but instead of ejecting the ignited polypropylene, the pressure is used to cause the aluminium can to expand; this expansion then breaks the internal connections and disconnects the capacitor from the electric current.

The P2 types are also prone to catastrophic failure, where the disconnect feature cannot operate in sufficient time before the polypropylene escapes and causes a larger fire. Yet, the chances of this happening are significantly less than with P0. Capacitor safety classes are changing. P0, P1, and P2 are becoming S0, S1, and S2, and a new class 'S3' joins the ranks. This class is a compromise class employing a different method of connecting the internal workings of the capacitor that should, in the event of a failure, disconnect the capacitor in small portions (as opposed to the whole capacitor all at once).

The good news is that standards, too, are changing. There are proposals to force manufacturers to consider at minimum the new S3 types. Maybe the future of white goods will be free of capacitor fires. It takes time for these changes to filter through, especially as older appliances will continue to be used until their end-of-life. Until then, we will continue to see near misses, such as I experienced, or the devastation as I have often witnessed; all because manufacturers continue to turn a blind eye to the warnings the industry has known about for so long.





Large fire at Selsey Academy in August 2016

School Fires

Deon Webber

Like most other years, 2016 has seen a number of catastrophic school fires in the UK, which have not only had a financial impact on education providers and insurers and a significant impact on the environment, but also a dramatic effect on the education of the pupils attending these establishments. Whilst there is a widespread recognition of the financial impact of fire events, the personal impact is often overlooked, and in these circumstances, it is the pupils who lose out because their education is disrupted causing loss of learning time that they may struggle to get back.

Fires can have a drastic impact on the operation of a school. They can endanger lives, jobs, facilities and investment. Damage to coursework can cause a great deal of stress to pupils and affect exam results. Destruction of classrooms can mean temporary classroom accommodation and the distraction of construction on-going on site.

The Scale of the Problem

The Arson Prevention Forum state that there are on average 38 school fires every week in the UK with 17 of them being identified as deliberate and 40 of these fires every year causing over £5 million worth of damage. This is echoed by the ABI who report that 1500 fires in schools and other educational establishments occur each year, around 4 every day, with the biggest having a typical cost of £2.8 million. In total, school fires cost over £80 million in insured damages each year.

The top five causes of fires in schools are listed as:

Deliberate Fires

Around half of fires in schools are identified as deliberate, a third of these occur during school hours. Those responsible are most commonly aged between 10-18 years of age, and live in the local area. School arson is frequently carried out by either a pupil, ex-pupil or someone with siblings at the school. Often they are started in bins or in piles of waste because it is the easiest thing to light.

Cooking Equipment Fires

Because schools often have a lot of cooking equipment in the kitchens, there are many potential problems that can come from them such as cooking fires involving oil or hot surfaces, or fires in extraction systems

Heat Source Fires

There is also the potential of fires related to someone playing in or around heating sources of the school. This could relate to hot surfaces in metal work or craft lessons or in science laboratories.

Heating Equipment Fires

These are often started due to a fault at/or near the heating source or equipment. Small ignitions can cause bigger fires to grow and where combustible material is nearby, a larger fire can soon develop.

Electrical Fires

Electrical fires are fast becoming one of the top causes of accidental fires. These fires can then cause other surrounding areas to catch fire, especially dependant on the structural material used in building the school, and what is around it.

Plumes of smoke from a school fire

The Value of Sprinklers

It has been recognised for many years that the installation of sprinklers can have a dramatic effect on controlling the level of damage caused by fires in schools. Following an extensive campaign by the Arson Control Forum, Jim Knight, the Minister of State for Schools, announced in 2007 in Parliament, that it would now be policy for sprinklers to be fitted in all new schools and those under refurbishment. This initiative was supported by many insurance companies, MP's, the Association of Teachers and Lecturers (ATL) and many other influential groups and individuals.

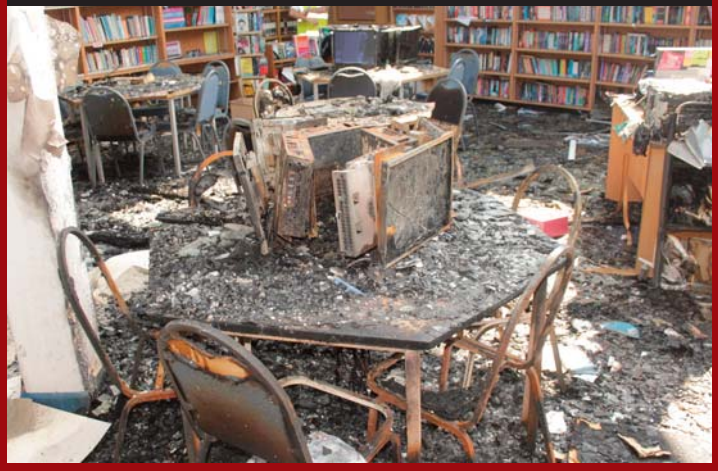
Damage is generally not only limited to where the fire occurred

The cost of a sprinkler system is generally between 1 and 2% of the total construction bill. The estimated cost for a medium-sized primary school is just over £100,000. It is estimated that the cost of installing sprinklers could be recouped within 10 years in the reduction in insurance premiums alone.

During 2016 however, a dramatic U-turn on this policy took place, announced in a redrafted version of "Building Bulleting 100: (BB100) Design for fire safety in schools". Ministers have stated that "BB 100 no longer includes an expectation that most new school buildings will be fitted with them (sprinklers)".

This move has been condemned by the Fire Brigades Union and the ABI, who are campaigning for a reversal of the decision. Laura Hughes, Property Policy Adviser at the ABI stated, "The case for sprinklers is clear. Aside from their ability to save lives they drastically reduce the amount of damage done when there is a fire, saving money and getting that school back up and running more quickly. It's a win-win situation for schools and all children should be benefitting from this additional safety measure."

The loss of books and IT equipment can be catastrophic



IFIC Forensics support this call, recognising that this short-term cost saving measure will turn out to be far more expensive in the long term. It is less than 10 years since the Government recognised this fact and proposed mandatory installation in new builds. In less than that time, the average cost of a school fire has risen from £330,000 (2009) to £2.8 million and insurance premiums will understandably continue to rise.

Fires can have a drastic impact on the operation of a school

Conclusion

Through BB100, the Government should continue to recognise the impact that fires can have on schools, pupils and communities. They should not only continue to support the installation of sprinklers but continue partnership work with the Fire Protection Association, the Arson Prevention Bureau, the ABI, the National Foundation for Educational Research and the many other organisations who have highlighted the catastrophic effects of school fires and how to prevent them.

The emphasis should be on prevention, which should start at design and construction, through Building Regulations and fire engineered solutions. A proper risk assessed approach to all school activities will reduce the opportunities for accidental fires, whilst vigilance and effective security and monitoring provision will deter arson and catch those who undertake it. Finally, if a fire occurs, modern detection and alarm systems will alert occupants and responders, while the provision of sprinklers and smoke control, systems will mitigate damage until the fire is dealt with. IFIC Forensics would also recommend a thorough forensic investigation to uncover the underlying cause.

Government agencies should continue to collect and evaluate data, to identify the scale of the problem and the effectiveness of current prevention methods. Only a persistent approach will control this scourge, which impacts so much on our social and financial prosperity, the environment and disrupts our children's education.

References

ABI response to Department for Education consultation on Fire Safety Design for Schools (Aug 2016)

Building Bulleting 100: Design for fire safety in schools – Education Funding Agency March 2014

Fire Brigades Union, "The government's ruthless decision on school sprinklers is a huge mistake" (Sep 2016)

Your Data is Safe with Us

Dr Barry Clark, Head of ITC - IFIC Forensics

As a company, we take cyber-security very seriously and IFIC Forensics meets all the ITC criteria required by the Insurance industry.

Recognising the evolving cyber-risk environment, we are rapidly and additionally achieving further extensive certifications, to assist us in securely supporting our busy forensics investigation team and providing a rapid and optimal service to our clients based on our state-of-the-art ITC systems. To this end, we have just acquired the BSI Cyber Secure Certificate and ISO 27001 certification is in progress. We have radically transformed investigator and client support by implementing Praxis - our in-house developed fully internet-based Case Management system. Praxis is an end-to-end system, supporting all our cases, client contracts, Service level Agreements, measurement of key Performance Indicators, Court or legal etc.

IFIC Forensics relies on ITC to provide a rapid response to our clients. Over the past 12 months IFIC Forensics has invested heavily in ITC infrastructure with emphasis on data security and has implemented state of the art hardware and software to manage our working relationships with our clients and protect your confidential data.

In terms of hardware, all our key systems are virtualised and replicated off-site in near real-time so that in the unlikely event of any major outage at HQ, we will be back online within a very short time (30-60 minutes) with no loss of data or operational functionality. Email and telecommunications are designed to be unaffected. In accordance with our Business Continuity Management Plan, these systems are stress-tested on a regular basis. In addition to near real-time replication of all mission critical data, we have extensive backup strategies in place, especially designed to provide protection against the more extreme forms of malware. We use the latest Microsoft technologies to control access to all our systems and external devices used in the field are protected by Microsoft Mobile Device Management and can be remotely locked or wiped. We additionally protect confidential company data by use of Azure rights management which for example means we can send an email attachment which can only be read and neither copied nor forwarded out of the company environment. With this market-leading level of “designed-in protection”, not only can you trust IFIC Forensics to always be there for you when you need us, but be reassured that your data is safe with us.

In terms of software, we consider our Praxis internet-based case management system to be the market leading software for managing complex investigative SLA contracts in our industry. The primary goal of IFIC Forensics, ably assisted by Praxis, is to minimise the time taken to obtain report outcomes on any investigation and so expedite the claim process for both Loss Adjusters and Insurers. Praxis pro-actively tracks all the performance of all our SLA cases, to ensure we remain well within contract compliance limits, and additionally keeps the progress of “further reports” on the radar to ensure timely completion.

Everything we do for our clients (activities, time, expenses etc.) is line-item logged, and contract performance is monitored by Praxis, to assist us in providing our signature “Technical Excellence: Rapid Response” service to our clients. Accordingly, we provide clients with accurate summary (and if required, fully detailed) invoices, all in the appropriate currency with any applicable VAT rates.

To confirm our commitment to Cyber Security, the ITC Systems at IFIC Forensics have successfully achieved the BSI Cyber Secure Certificate, which is now mandatory for working with Government contracts, contributing to the ISO 27001 certification process. As part of the certification process, external contractors to BSI performed penetration testing on our systems to ensure their resilience to cyber-attacks. Our main company communications systems, Email and Microsoft Office 365, are already certified by Microsoft to be ISO 27001 compliant, and we are currently working with LRQA / UKAS to acquire full ISO 27001/2 certification for all IFIC Forensic systems by the end of 2016. This process also complements the ISO 9001 standard already held by IFIC Forensics and currently we are merging the two processes to secure both ISO 27001/2 and ISO 9002.

Praxis also has Data Room capability. Our clients can be given access to the data room in a secure manner to access data IFIC Forensics wishes to share. This feature avoids the need to place confidential data in the Cloud: all data remains on the servers hosted on premise at IFIC Forensics. We encourage our clients to use this feature to simplify their own work flow and interactions with IFIC. Please contact opsmanager@ific.co.uk to discuss how this can assist you.

IFIC Forensics – your data is safe with us.

Health & Safety: Managing Asbestos at Fire Investigation Scenes

Mike Wisekal

IFIC Forensics undertake many types of investigations in various environments, structures and locations. Any building built or refurbished before the year 2000 may contain asbestos. Asbestos is a naturally occurring fibrous mineral that was commonly used in building materials, fireproofing and insulation products.

Asbestos Cement Roof Sheets damaged by Fire

Some asbestos materials are more vulnerable to damage and more likely to give off fibres release than others. The more asbestos fibres breathed in, the greater the risk is to health. Asbestos fibres can cause lung cancers and lung diseases. The affects are not immediate; they often take time to develop, possibly 15-60 years. Once diagnosed it is often too late to do anything.

As long as the asbestos containing material is in good condition, and is not being or going to be disturbed or damaged, there is negligible risk. The challenge for the Fire Investigator is managing a complex fire scene that contains asbestos materials, and still achieve the objectives of determining origin, cause and the circumstances that lead to the development of fire.

The Control of Asbestos Regulations 2012 legislates a duty to manage environments where asbestos containing materials are present. IFIC Forensics has developed a Safe Operating Procedure for its investigators to follow for instances when asbestos containing materials are discovered at fire scenes. A Safe Operating Procedure is a formal procedure which results from the systematic examination of a task in order to identify all the hazards. It defines safe working methods to ensure that hazards are eliminated or risks minimised by establishing effective control measures.

This procedure is in guidance with the Control of Asbestos Regulations 2012 and the Approved Code of Practice 'Managing and Working with Asbestos' published by the Health and Safety Executive. Adopting a safe working practice such as this helps to reduce the risk of exposure to as low as reasonably practicable. Our Safe Operating Procedure utilises an Asbestos Management Plan when necessary for protracted incidents, therefore ensuring all appropriate control measures are in place to safely and legally proceed with an investigation.

Asbestos Insulting Board damaged and displaced in fire scene

A simple framework should be adopted on instances of discovering the presence of asbestos at fire investigation scenes.

- A risk assessment should be completed;
- Consider obtaining an asbestos register or survey;
- On discovery of asbestos, stop work immediately;
- Minimise the spread of contamination to other areas;
- Keep exposure as low as reasonably possible;
- Determine if a licenced contractor is required for the task involved;
- Keep the client appraised of the situation and decide a plan of action.

A recent publication from the Health and Safety Executive informs how a man was fined for potentially exposing members of the public to asbestos as he failed to ensure an asbestos survey was completed prior to any work taking place.

http://press.hse.gov.uk/2016/man-fined-for-potentially-exposing-members-of-the-public-to-asbestos/?eban=govdel-press-release&cr=07-Mar-2016

According to the Control of Asbestos Regulations 2012 there are some working circumstances when asbestos containing materials are present that require a licensed contractor to undergo the work. Recognising and understanding these circumstances is essential in advancing an investigation in a timely, safe and legal manner. The key to moving forward is to act on the findings. IFIC Forensics has experience in working under such conditions. This work has involved working alongside asbestos removal specialists to facilitate and support the forensic scene access and examination.

Anyone who may work on asbestos must be trained and use safe working methods to do so. Most work with asbestos needs to be done by a licensed contractor. IFIC Forensics recognises its duty to manage asbestos and implements a safe system of works whereby facilitating the needs of an investigation safely and legally.

Greg Owens
Investigator

IFIC Forensics is delighted to welcome Greg Owens who joined the team as an Investigator in July of this year. Greg is based in IFIC Forensics brand new Dublin office located at Unit E4, Centrepoint, Rosemount Business Park, Ballycoolin, Dublin 11, which opened at the beginning of October 2016.

Greg began his career by obtaining his BSc (Hons) in Forensic and Environmental Analysis at Dublin Institute of Technology, which led to him working in the pharmaceutical industry in both quality control and environmental, health & safety laboratories. Greg then went on to gain his MSc in Forensic Science at University of Strathclyde's renowned Centre for Forensic Science. As part of the course, Greg completed a project in conjunction with the Forensic Science Laboratory of Ireland, (now Eolaíocht Fhóiréinseach Éireann, EFE) researching the use of Raman spectroscopy for the identification of potential bodily fluid stains at a crime scene.

Following the completion of his MSc, Greg worked as a researcher in the University's Centre for Forensic Science for a number of years. During this time, he worked on a variety of projects, with the main focus of his research being around method development for the detection of trace levels of drugs of abuse and explosives.

On returning to Ireland, Greg joined a large loss adjusting firm where he worked for over three years. Initially working as a desktop claims handler and then as a property loss adjuster, he has gained an excellent understanding of the insurance industry, of policy wordings, claims management and loss adjusting. This experience gave him first-hand knowledge of what a loss adjuster requires from their appointed forensic expert.

Greg has completed a number of fire investigation courses in Ireland, the U.K. and U.S.A.

Greg is a Certified Insurance Practitioner (CIP) as well as a member of both the Fire Investigators Association of Ireland (FIAI) and the International Association of Arson Investigators (IAAI).

Merry Christmas and a Happy New Year from all at IFIC Forensics.