



NFCC
National Fire
Chiefs Council

The professional voice of the UK Fire & Rescue Service

Competency Framework for Fire Investigation Second Edition

Quality Review System	
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Acknowledgements

To be included following consultation process

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Foreword

As Chair of the Fire Investigation (FI) Committee for the National Fire Chiefs Council (NFCC), I am pleased to introduce the revised FI competency framework. As the professional voice of Fire and Rescue Services (FRS's) in the UK, NFCC aims to drive improvement and consistency in service delivery. NFCC promotes high standards of professionalism within the fire sector, which this document assists in delivering.

The revised competency framework will help to support FRS's in this time of change, as we progress towards BS/EN ISO 17020 accreditation (1) and seek compliance with aspects of the Forensic Science Regulators Code of Practice and Conduct (2).

The revised FI competency framework will assist FRS's in demonstrating how they assure the competence of their FI staff and their commitment to invest in their people. This approach is designed to create a more competent and professional service, increased consistency of fire investigation and greater reassurance of the professionalism of FI's to the judicial system and members of the public alike.

Section 1: Introduction

- 1.1 The delivery of effective investigations into the cause and origins of fire depends on the competency of the professionals who undertake the work. Common competence standards underpinned by a robust development process are essential to developing effective fire investigators and contributing to effective delivery.
- 1.2 The FI competency framework was first published in May 2018. It was produced to provide a common approach to achieving and maintaining a standard of competency of FI's. It provided an opportunity for FRS's to demonstrate a commitment to achieving a professional, competent workforce to provide a more consistent standard of investigation. This was to provide a supportive step towards accreditation to BS/EN ISO 17020 by providing quality regulation, advice and reassurance that FI's were suitably trained, qualified and competent to undertake their role.
- 1.3 Following the requirement of the Forensic Science Regulator to seek accreditation to BS/EN ISO 17020, when providing evidence for the Judicial system, this framework document has been reviewed to assist in supporting the required level of competence required for compliance.
- 1.4 Where accreditation to BS/EN ISO 17020 is not a factor to be considered, this competency framework document provides guidance and a structure to support the effective training, development and qualification of staff who undertake FI's.
- 1.5 Effective FI's depend on the knowledge & understanding, training, competency and experience of practitioners who carry out the scene examination. FI is a challenging and evolving role where continued learning and practice is necessary to develop, maintain and evidence professional competency. It is therefore essential that public and private sector agencies agree to minimum levels of competency to be achieved by all personnel performing the role at each relevant tier of investigation. This document is intended to guide FRS's to achieve a standardised training and competency framework.
- 1.6 Although deemed as best practice, and applicable to FRS staff who undertake Tier 1 FI's, the contents of this competency framework are aimed at FI's who undertake Tier 2 FI's

Section 2: Scope of the Framework

- 2.1 This FI competency framework document has been developed for FRS's requiring their staff to undertake FI's anywhere within the United Kingdom of Great Britain and Northern Ireland. It provides a framework for the development, maintenance and demonstration of competence of staff who undertake FI's. This framework document may also be applicable to other organisations that employ FI's, such as Police Forces and public sector organisations and be considered as a best practice document.
- 2.2 This framework splits the competency requirements into Tier 1 and Tier 2 fire scene investigations. It clarifies the definition of the two different tiers of investigation and provides guidance as to what level of competency is required for each of them.

Section 3: Guidance on appropriate levels of competency

- 3.1 **Tier 1 fire scene investigations** can be defined as a routine or uncomplex FI. These are usually undertaken to provide information required by the Secretary of State, through the national Incident Recording System (IRS), by practitioners initially attending the fire scene. In most cases that will be FRS Incident Commanders, normally at Crew or Watch Manager level. Staff undertaking such fire scene investigations should receive a level of FI awareness training which enables them to accurately complete the IRS.
- 3.2 This training will also assist those investigators to identify when the investigation is beyond their level of expertise and to summon the support of investigators trained to carry out a Tier 2 fire investigation. Staff performing Tier 1 FI's should be trained and competent to a minimum level which meets the criteria deemed appropriate by the organisation, meeting the descriptor laid down in the Qualifications and Credit Framework (QCF) and the European Qualifications Framework (EQF) to a minimum academic level of 2 on the academic scale (3) (4) (5).
- 3.3 **Tier 2 fire scene investigations** are defined as complex fire and/or explosion incidents (non-terrorist) where the origin and cause are not easily established. Non-suspicious or non-crime related scene investigations may be carried out solely by FRS FI's. In the case of fires and/or explosions involving fatal or serious injury, fires of interest determined by the organisations or those of a suspicious nature with the potential to enter the criminal justice system, a collaborative multi-agency team approach should be adopted.

3.4 In such cases the team will be led by the Police Senior Investigating Officer (SIO) supported by some, or all of the following:

- Forensic Scientists from the private sector;
- Fire and Rescue Service staff;
- Nominated Police Officers including murder and / or major crime team;
- Crime Scene Managers and Scientific Support Officers;
- Fire Investigators appointed on behalf of the Insurers;
- Specialist contractors required to perform a particular task or role;
- HM Coroner;
- Appliance manufacturers;
- Health and Safety Executive;
- Other interested parties.

3.5 These should be investigated by competent Tier 2 FI's with specific training, qualification and experience to undertake a more detailed or extensive fire scene investigation than required for Tier 1 fire investigations.

3.6 The required level of competence for a Tier 2 Fire Investigation can be arrived at through a wide-ranging combination of qualifications, structured specialist training courses and experience. Irrespective of the means used, competent Tier 2 FI's must demonstrate the essential knowledge and skills equivalent to a recognised Level 5 qualification, deemed appropriate by the respective organisation (6).

3.7 Individual organisations are responsible for determining whether or not they differentiate between FI's that would carry out single-agency or multi-agency investigations, for establishing their FI development pathway and their maintenance of competency strategy.

Section 4: Objectives of the Framework

- 4.1 The objective of this document is to provide a framework for FRS's to follow to achieve, maintain and demonstrate appropriate and consistent standards of competency within their specialist workforce. This document also provides a framework to support external auditing processes, such as ISO 17020.
- 4.2 This will ensure that FRS's can effectively implement Integrated Risk Management Plans, or other planning approaches used in the devolved administrations and discharge their duties in relation to Section 45 and 46 of the Fire and Rescue Services Act 2004 (7), Section 29 of the Fire (Scotland) Act 2005 (8) and Section 20 of the Fire and Rescue Services (Northern Ireland) order 2006 (9).

Section 5: Benefits of the Framework

- 5.1 **For the individual:**
 - 5.1.1 Reduces individual risk to challenge within the Judicial or Coronial court environment by ensuring the most up to date advice and information is given to individuals to enable them to meet their statutory duties;
 - 5.1.2 Enables individuals and their line managers to identify gaps in knowledge, skills and behaviours. Learning and development needs for current and future roles can therefore be prioritised;
 - 5.1.3 Assists in meeting the individual's key objectives by providing supporting evidence of how the individual performed;
 - 5.1.4 Provides greater opportunities to improve professional and personal standing;
 - 5.1.5 Supports the selection of people with the right skills and behaviours for the role;
 - 5.1.6 Improved professional and career development planning;
 - 5.1.6 Makes a significant contribution to continuous personal improvement;
 - 5.1.7 Ensures that FI's have the requisite skills, knowledge, understanding and other attributes necessary to be competent.

5.2 For the organisation:

- 5.2.1 Promotes quality and consistency in FI practices throughout Great Britain and Northern Ireland;
- 5.2.2 Reduces organisational risk to challenge within the Judicial or Coronial court environment by ensuring the most up to date information is available to FI's whilst seeking to maintain an agreed level of competence.
- 5.2.3 Allows FRS's to achieve, maintain and demonstrate appropriate standards of competency within their workforce to support organisational and individual effectiveness and performance;
- 5.2.4 Each FRS can understand the competency of their staff, deploy them effectively and can succession plan for workloads defined in their Integrated Risk Management Plans;
- 5.2.5 Helps to better plan responses to changing and emerging environmental needs and to improve workforce alignment around them;
- 5.2.6 Presents a common format, which is simple to understand and provides a consistent language across organisations;
- 5.2.7 Provides the basis for measurable and standardised people management processes which enhances the employee experience;
- 5.2.8 Provides a foundation for developing staff with responsibilities for undertaking FI's;
- 5.2.9 Promotes effective compliance with relevant FI and forensic codes of practices.

5.3 For the Judicial, Coronial and other interested parties:

- 5.3.1 Promotes quality and consistency in the application of FI activities;
- 5.3.2 Provides assurances that FI's are competent to perform their role.
- 5.3.3 Provides assurances that FI's are consistently competent and the evidence provided is of a reliable level.
- 5.3.4 Provides an increased opportunity for financial efficiencies a result of earlier pleas, due to consistent and improved competence of FI's.

Section 6: Definitions

Accreditation of Prior Experiential Learning (APEL)

APEL is a process by which both formal learning from certificated learning and informal learning from experience and uncertificated training from attending workshops/seminars etc, are considered for academic recognition.

Audit

The collection and assessment of independent information on the efficiency, effectiveness and reliability of fire investigation activities or quality management systems, whether through simulation or live scene assessments.

Competence

The combination of training, skills, experience, knowledge and behaviours that a person has and their ability to apply them to perform a task safely and effectively.

Competencies

The attributes of an individual, applied personally or collectively as part of a team.

Continuous Professional Development (CPD)

Continuous professional development is the intentional maintenance and development of the knowledge and skills needed to perform in a professional context. It includes the process of tracking and documenting the skills, knowledge and experience that a Fire Investigator gains both formally and informally as they work, beyond any initial training. It is a record of what is experienced, learned and then applied.

Fire Investigator

An individual who has undergone specialist training together with the relevant level of experience to competently investigate a fire scene to determine the cause and origin of the fire, beyond a level of doubt and comment on its likely development.

Fire Investigation

Sometimes referred to as **origin and cause investigation**, is the process of determining the origin, cause and development of a fire or explosion.

Induction

An induction refers to the process of ensuring new fire investigators are acquainted with the business processes, role requirements and helping them gain the information required for them to become a valuable team member.

Initial Professional Development (IPD)

Initial Professional Development is the intentional workplace development of the knowledge and understanding, development of skills and competence, and the commencement of the application of professional judgement needed to perform in a professional context. It includes the process of tracking and documenting the skills, knowledge and experience that a Fire Investigator in development gains both formally and informally as they develop competency. All relevant IPD which is experienced, learned and then applied should be recorded which will assist in demonstrating competence at professional review.

National Occupational Standards (NOS)

National Occupational Standards are statements of the standards of performance individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding.

Professional Body

A Professional Body is an organisation with individual members practicing a profession or occupation in which the organisation maintains an oversight of the knowledge, skills, conduct and practice of that profession or occupation. For example, The United Kingdom Association of Fire Investigators, the Institution of Fire Engineers, the International Association of Arson Investigators, the National Association of Fire Investigators or the Chartered Society of Forensic Science are examples of related professional bodies.

Recognised Prior Learning (RPL)

Recognition of prior learning (RPL) is the process of recognising previous formal, informal or experiential learning so that the learner avoids having to repeat learning/assessment within a new qualification. RPL is a broad concept and covers a range of possible approaches and outcomes to the recognition of prior learning (including credit transfer where an awarding organisation has decided to attribute credit to a qualification).

Section 7: Limits of Competency

- 7.1 It is the responsibility of each FI to ensure that they are aware of, and work within, the range of their personal competency, requesting support and advice from other FI colleagues, with the requisite competencies and experience for the task concerned. This should also be addressed through identification of personal training needs in conjunction with line managers and remedial actions taken where necessary.
- 7.2 Where a FI considers that they are being requested to work outside the scope of their competency they should follow the internal procedures of their organisation to address this. It is also the responsibility of each FRS to support FI's to work within the limits of their competency.

Section 8: Recognised Prior Learning (RPL)

- 8.1 Some FI's will have attained a level of competence prior to the publication of the original competency framework document in 2018. To provide a consistent competency standard across all FRS's, individuals who undertook training which does not meet this competency framework should be assessed for RPL (10) (11).
- 8.2 Where prior learning is not considered equivalent, additional training assessment and qualification should be considered to ensure competence of all FI's at appropriate levels.

Section 9: Competence Standards

- 9.1 Competence is comprised of three essential elements – knowledge, skills and behaviours. FRS's must ensure that FI's meet all specified elements and can demonstrate competence for the individual to undertake their role against nationally recognised occupational standards. Examples of National Occupational Standards for FI are contained within [Appendix B](#)
- 9.2 The competence of staff shall be routinely assessed at defined intervals to ensure that it has been maintained and is up to date. Policies and procedures for on-going competency should be produced which include identified remedial actions when competence is found to have lapsed (2).

Section 10: Development Process

10.1 FRS's should develop all staff who undertake the role of a FI, especially those that are new or inexperienced, through a formalised development process, to achieve the requisite skills, knowledge, training and qualification required for their role. During and following this process there should be a structured programme of continued learning in addition to the individual's normal work.

10.2 Line managers must ensure that new or inexperienced FI's are tasked with a level of work that is commensurate with their competence. Where more challenging work is assigned for development purposes, close supervision and mentoring should be provided to ensure organisational standards are maintained.

10.3 **Development is divided into 7 broad areas as follows:**

- Induction
- Accredited Prior Experiential Learning (APEL)
- Foundation training
- Development programme
- Qualification
- On-going training, development and CPD activities
- Assessment of competence

10.4 **Induction**

10.4.1 Staff induction processes are well embedded in most organisations. It is essential to undertake an induction process when a new FI commences the role and begins the journey of development to a level which is deemed as competent by the respective FRS.

10.4.2 This process must be flexible to ensure it meets the development requirements of the inductee, as well as highlighting such areas as the working practices, role expectations, training requirements, development opportunities and areas of responsibilities.

10.5 **Accreditation of Prior Experiential Learning (APEL)**

10.5.1 APEL is a process by which both formal learning from certificated learning and informal learning from experience and uncertificated training from attending workshops/seminars etc, are considered for academic recognition. It describes the process used to evaluate existing skills and knowledge for the

purpose of recognising competence against a given set of standards, competencies, or learning outcomes (12).

10.5.2 Methods of assessing prior learning are varied and should include an evaluation of prior experience gained through previous roles or observation of workplace performance. The essential element of APEL is that it is an assessment of evidence provided by an individual to support their claim for competence against a given set of standards or learning outcomes.

10.5.3 It is good practice to present all APEL evidence in the form of an evidence portfolio, with all the evidence being presented bearing relevance to the subject matter. An example of a portfolio structure is as follows:

- Title page – including name and the course the APEL relates to;
- Table of contents;
- A summary of each module the APEL applies to, cross-referenced to relevant employment, education, training, qualifications and learning activities;
- Appendices (if relevant) – including copies of certificates and other evidence such as assessments or written feedback.

10.5.4 When considering the evidence to include in the APEL portfolio, it should ideally meet the following criteria:

- **Current:** Ideally no more than 3 years old or presented with further evidence that demonstrates how the individual has kept up-to-date and built on prior learning;
- **Authentic:** Produced as a result of own work or own contribution;
- **Sufficiency:** There should be sufficient evidence to demonstrate achievement of the learning claimed?
- **Validity:** There should be an appropriate match between the evidence in the portfolio presented and the learning claimed?

10.5.5 All APEL evidence should be presented for consideration against their own organisational assessment criteria.

10.5.6 In the case of formal qualifications, it will ultimately be a matter for the awarding body or learning provider to assess if the evidence presented for the purposes of APEL meets the required criteria and what elements, either

in full or in part, is accepted towards meeting the requirements of the award being claimed.

10.6 **Foundation training**

10.6.1 FI's carrying out Tier 2 Investigations should undertake appropriate foundation training which provides the appropriate level of skills and knowledge to a recognised standard equivalent to academic level 5 (13) (14) (15).

10.6.2 All Tier 2 FI's should be working to the standards prescribed within the 'Code of Practice for Fire Investigators within the Justice System in the UK' (6), the Forensic Science Regulators code of practice and conduct and BS EN ISO 17020 (where applicable).

10.7 **Development programme**

10.7.1 New or inexperienced Tier 2 FI's should complete a bespoke development programme and record and demonstrate applied learning. Each new or inexperienced FI should be assigned a suitably skilled, qualified and competent mentor to support the development and progression of the FI.

10.7.2 The development programme should include regular meetings with a FI competent line manager or an assigned mentor. This provides an opportunity for the new or inexperienced FI to discuss their development. The new or inexperienced FI should be encouraged to talk openly about their progress and career objectives. The process should indicate any difficulties being experienced that may impede progress. Mentors should be consulted on the progress where appropriate.

10.7.3 The FI competent manager should map the individuals progress against the knowledge, skills and behaviours required for their role, identify additional training needs and provide support where necessary as part of this process. This will assist the new or inexperienced FI to carry out their work as part of an established team, whilst at the same time ensuring that they are on course to fulfil their own development needs.

10.7.4 Appropriate bibliography should be selected which indicates the main principles and themes common to most FI's that may be encountered by the new or inexperienced FI. The chosen bibliography should not be considered as a comprehensive list of information, rather, a solid base from which to start to extend knowledge within the discipline of FI. FRS's should assist the development of new or inexperienced by ensuring access to key documents in the chosen bibliography.

10.7.5 It is important that new or inexperienced FI's learn from experienced competent FI's. They should shadow competent staff at the appropriate level for development. These are opportunities to support workplace learning and encourage discussions relating to FI issues. Shadowing opportunities should be chosen on the basis that they stretch the trainee's present knowledge and give scope for learning and discussion.

10.8 **Qualification**

10.8.1 Once the competent FI manager or the assigned mentor is satisfied that the new or inexperienced FI has demonstrated an acceptable level of progress, which is evidenced by the completion of a development programme workbook or other recording mechanism, the new or inexperienced FI, subject to meeting the pre requisites of the awarding body, must be selected to undertake an appropriate FI related qualification to a minimum level 5 on the academic scale (13), as required by the respective organisation (14) (15).

10.9 **Continual Professional Development**

10.9.1 Continuing Professional Development (CPD) is the learning activities professionals engage in to develop and enhance their abilities (16). It is the intentional maintenance and development of the knowledge and skills needed to perform in a professional context (17), which enables learning to become conscious and proactive, rather than passive and reactive.

10.9.2 CPD combines different methodologies to learning, such as training workshops, conferences and events, e-learning programs, best practice techniques and ideas sharing, all focused for an individual to improve and have effective professional development. A structured, practical and methodical approach to learning will assist FRS's to develop the skills & knowledge of key staff in their organisation.

10.9.3 Engaging in CPD ensures that learning, skills, education and practical qualifications do not become outdated or obsolete; allowing individuals to continually 'up skill' or 're-skill' themselves, regardless of occupation, age or educational level.

10.9.4 CPD activities can range from formal educational activities such as instructor-led training courses, workshops or seminars, to more informal approaches such as work-based learning or mentoring. CPD can also include self-directed study such as e-learning courses and structured reading. CPD can be provided by specialist companies (e.g. commercial training providers, independent coaches), or provided internally.

- 10.9.5 The recommended minimum level of CPD activity is equivalent to 25 hours per year of formal FI related study time. This may be spread in excess of 1 year, but in that case, 75 hours of formal study should be completed over 3 years (provided that any 1 year has no less than 10 hours formal study time).
- 10.9.6 It is expected that a record of CPD would include a mixture of formal and non-formal activities. Informal CPD should be credited on a 'two hours for one basis', with formal study being not less than 50% of total study time. Where individuals are registered with or accredited by a professional body, they should ensure that they fully comply with each respective professional body's CPD requirements.
- 10.9.7 Information on what constitutes formal and non-formal activities is contained within [appendix C](#), with an example of a CPD template being located in [appendix D](#).
- 10.10 **Assessment of competence**
- 10.10.1 FRS's will have embedded processes to assure themselves of the continued competency of their staff. To assure each FRS that a sufficient level of competence is maintained in the field of FI, an audit of skills, training and CPD should be conducted, on a minimum basis of 12 months.
- 10.10.2 This process is best undertaken on a rolling basis according to the subjects to be assessed / audited. The confirmation of competence should test the application of FI practices, methodology and reporting for each FI. The National Occupational Standards ([Appendix B](#)) should be utilised as the benchmark for performance.
- 10.10.3 All identified competencies should be assessed once over a rolling 4-year period.
- 10.10.4 A formal assessment of the application of FI methodology and skills should be conducted, as a minimum, once every 4 years.
- 10.10.5 The outcomes of each confirmation of competence process should be recorded, and all learning points or areas of concern should be discussed with each FI, together with any development plan(s) which may be required to address the areas raised during the confirmation of competence.

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Consultation document

Appendix A: Abbreviations

APEL	Accredited Prior Experiential Learning
CIPD	Chartered Institute of Personnel and Development
CSFS	Chartered Society of Forensic Sciences
CPD	Continuous Professional Development
FRS	Fire and Rescue Services
FRS Act	Fire and Rescue Services Act 2004
FSR	Forensic Science Regulator
IPD	Initial Professional Development
IFE	Institute of Fire Engineers
IRMP	Integrated Risk Management Plan
NFCC	National Fire Chiefs Council
NOS	National Occupational Standards
RPL	Recognised Prior Learning
UK-AFI	United Kingdom Association of Fire Investigators

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Appendix B: Fire Investigation National Occupational Standards

FRS FI1

Prepare to investigate an incident involving fire and/or explosion

Overview

This unit is about preparing to investigate an incident involving fire and/or explosion. It covers:

Determining the nature and scope of the investigation

This involves identifying and evaluating available information about the incident and its development, including the hazards and risks.

Setting up working arrangements to carry out an investigation

This involves establishing working arrangements including the involvement of specialists and other agencies.

Target Group

The unit is recommended for all practitioners with responsibility for fire investigation

FRS FI1

Prepare to investigate an incident involving fire and/or explosion

<u>Confirmation of competence outcomes</u>	<u>Confirmation of Competence criteria</u>
<i>The Fire Investigator will be able to demonstrate:</i>	<i>The Fire Investigator will be able to demonstrate how to:</i>
1 An understanding of the principles of investigation of fire and/or explosion	1.1 Evaluate the levels and types of investigation of fire and/or explosion 1.2 Apply the purposes and priorities of fire investigation in relation to community fire safety, criminal proceedings, insurance considerations, civil litigation, research and potential outcomes 1.3 Identify the principle hazards and risks through a formal risk assessment process and ensure suitable controls measures are in place in the context of fire and/or explosion investigation 1.4 Apply the principles of the investigative process based on scientific method and practice 1.5 Apply the use of science to determine the origin, cause and behaviour of fire and/or explosion 1.6 Apply the principles of fire and/or explosion dynamics to an investigation 1.7 Critically compare the use and application of resources typically used in an investigation of fire and/or explosion 1.8 Determine factors and actions which influence the potential and actual contamination of a scene.

<p>2 Understand the legal and organisational requirements in relation to investigation of fire and/or explosion</p>	<p>2.1 Apply the powers of entry for fire investigation personnel</p> <p>2.2 Apply the legislative and organisational requirements when dealing with members of the public</p> <p>2.3 Apply the requirements for data protection and sub-judice</p> <p>2.4 Apply the requirements for obtaining consent to carry out a scene investigation</p> <p>2.5 Evaluate the benefits of taking an interagency team approach</p> <p>2.6 Apply the relevant standard protocols and joint memorandums of understanding in relation to fire and/or explosion investigation</p> <p>2.7 Consider the current relevant health and safety legislation and its application to fire investigation</p> <p>2.8 Consider the role, responsibilities and limits of authority of specialists and other agencies involved in fire/explosion investigation</p>
<p>3 Be able to determine the nature and scope of the investigation</p>	<p>3.1 Confirm the type, location, extent and circumstances of the incident</p> <p>3.2 Determine scene priorities in relation to the fire and/or explosion investigation</p> <p>3.3 Evaluate available information relevant to the incident</p> <p>3.4 Establish the need for the involvement of specialists and other agencies in the investigation</p>

<p>4 Be able to set up working arrangements to carry out an investigation</p>	<p>4.1 Agree with internal and external personnel:</p> <ul style="list-style-type: none"> • arrangements for the safety and security of the scene • the methodology, timing, people and resources required for the investigation • primacy, roles, responsibilities and levels of authority and confidentiality for those involved • arrangements for the preservation, recovery and storage of evidence <p>4.2 Obtain relevant consent for the investigation to go ahead</p> <p>4.3 Confirm all agreements and arrangements are recorded</p>
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FRS FI1 Knowledge and understanding

You need to know and understand:

- K1 the powers of entry for fire investigation personnel, including members of the fire and rescue service and other agencies
- K2 the legislative and organisational requirements, including equality and diversity, when dealing with members of the public
- K3 requirements for data protection and sub judice
- K4 when it is necessary to obtain proper consent to carry out a scene investigation
- K5 the levels and types of investigation
- K6 the roles, responsibilities and limits of authority of specialists and other agencies involved in fire investigation
- K7 relevant interagency team approach
- K8 relevant standard protocols
- K9 relevant joint memorandums of understanding
- K10 scene priorities
- K11 the current relevant health and safety legislation and its application to fire investigation
- K12 the principles of hazard identification, risk assessment and management in the context of fire/explosion investigation
- K13 the principles of the investigative process based on scientific method and practice
- K14 the use of science to determine the origin, cause and behaviour of fire/explosion
- K15 the basic principles of fire/explosion dynamics and their application to an investigation

- K16 the range of resources to be used in an investigation and its application
- K17 the factors and actions which influence the potential and actual contamination of a scene

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FRS FI2

Investigate an incident involving fire and/or explosion

Overview

This unit is about an on-scene investigation of an incident involving fire and/or explosion. It covers:

Recovering and preserving physical and documentary evidence relevant to the investigation

This involves identifying, recording and preserving physical and documentary evidence relevant to the investigation.

Collecting witness evidence relevant to the investigation

This involves identifying and interviewing witnesses.

Compiling and providing available evidence

This involves organising and evaluating the available evidence (physical, documentary and witness), and providing this evidence along with a supporting report.

Target Group

The unit is recommended for all practitioners with responsibility for fire investigation.

FRS FI2

Investigate an incident involving fire and/or explosion

Confirmation of competence outcomes

The Fire Investigator will be able to demonstrate:

1 The methods and science of fire/explosion investigation

Confirmation of Competence criteria

The Fire Investigator will be able to demonstrate how to:

1.1 Consider the methods and equipment for handling and storing evidence to preserve continuity, avoid damage and any cross contamination

1.2 Gather information from victims and witnesses of incidents

1.3 Apply methods of interviewing victims and witnesses

1.4 Apply the fire science used in fire investigation

1.5 Apply how to analyse the process for identifying, eliminating and confirming potential ignition sources

1.6 Apply the principles of correlating burn patterns to identify area of origin and evaluate fire/explosion behaviour

1.7 Analyse the structural and environmental factors which may influence fire suppression and development

1.8 Consider the potential and actual contribution of the structure, finishes, fittings, equipment and processes to the development of an incident

<p>2 The requirements of working on scene</p>	<p>2.1 Conduct an internal and external survey of the structure and surrounds in relation to the investigation of fire development</p> <p>2.2 Identify and record evidence of both accidental and deliberate causes of fire</p> <p>2.3 Apply the principles of fire scene reconstruction</p> <p>2.4 Maintain and ensure the continuity and integrity of evidence</p> <p>2.5 Apply techniques for excavating fire debris whilst preserving key evidence</p> <p>2.6 Apply varying methods for recovering evidence from incidents including fatalities</p> <p>2.7 Deal with the deceased in a dignified manner whilst giving due regard to the objectives of the investigation and the nature of risk</p> <p>2.8 Utilise varying methods for recording the scene</p> <p>2.9 Analyse the behaviours of people involved in fire</p>
<p>3 How to recover and preserve physical and documentary evidence relevant to the investigation</p>	<p>3.1 Evaluate those factors that may have a bearing on the origin, cause and development of the incident</p> <p>3.2 Protect, recover and preserve evidence</p> <p>3.3 Undertake the investigation processes using the relevant Personal Protective Equipment and resources identified during the Risk Assessment process</p>

<p>4 How to manage the collection and preservation of evidence</p>	<p>4.1 Liaise with the people and agencies to achieve the handover of all relevant information and evidence where the responsibility for investigation is beyond their legitimate scope</p> <p>4.2 Comply with relevant legal, ethical and regulatory requirements in relation to fire/explosion investigation</p> <p>4.3 Organise evidence in a way that will assist analysis</p> <p>4.4 Confirm all evidence is accurately preserved and stored</p>
<p>5 How to collect witness evidence relevant to the investigation</p>	<p>5.1 Confirm details of people who may have information about the incident and their involvement</p> <p>5.2 Gather information from relevant people to support the investigation</p> <p>5.3 Carry out planned interviews with witnesses and victims in accordance with relevant legislation and organisational requirements</p> <p>5.4 Gather information in a way that:</p> <ul style="list-style-type: none"> • promotes co-operation • encourages open and honest response
<p>6 How to compile and provide available evidence</p>	<p>6.1 Confirm the validity, relevance and sufficiency of evidence</p> <p>6.2 Confirm available evidence is complete to resolve discrepancies where possible</p> <p>6.3 Record and disclose discrepancies, omissions, anomalies or inconsistencies in the evidence</p> <p>6.4 Follow the specified requirements for labelling and despatching evidence</p>

	6.5 Confirm that intended recipients receive compiled evidence and supporting report
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FRS FI2 Knowledge and understanding

You need to know and understand:

- K1 the methods and equipment for handling and storing evidence to preserve continuity, avoid damage and any cross contamination
- K2 the principles of investigation based on scientific methodology
- K3 the benefits of conducting an internal and external survey of the structure and surrounds which may influence fire suppression and development including any environmental effects
- K4 the potential and actual contribution of the structure, finishes, fittings, equipment and processes to the incident
- K5 the techniques for excavating fire debris whilst preserving key evidence
- K6 the importance of accurately correlating burn patterns to identify area of origin and evaluate fire/explosion behaviour
- K7 the principles of fire scene reconstruction
- K8 the potential ignition sources, their identification and process of elimination
- K9 the behaviour of people involved in fire
- K10 how to identify and adequately record evidence of obvious accidental causes of fire and deliberate ignition
- K11 the use of basic fire science in fire investigation
- K12 fire dynamics, chemistry and physics of combustion and heat transfer
- K13 the importance of maintaining continuity and integrity of evidence
- K14 the rules of evidence, continuity issues and methods for provision of secure storage and transport
- K15 how to recover evidence in a incident involving a fatality(ies) and liaise with appropriate personnel
- K16 how to avoid unnecessary distress of people and treat any deceased with respect giving due regard to your objectives and the nature of risk
- K17 methods for recording the scene
- K18 the roles, responsibilities and limits of your own personal authority and of other personnel and agencies at the investigation

FRS FI3

Report on the investigation of an incident involving fire and/or explosion

Overview

This unit is about reporting on the investigation of an incident involving fire and/or explosion. It covers:

Evaluating the results of an investigation

This involves organising and evaluating the outcomes of an investigation.

Reporting the conclusions of an investigation

This involves analysing the outcomes of an investigation and identifying hypotheses and conclusions and producing a final report.

Target Group

The unit is recommended for all practitioners with responsibility for fire investigation.

Consultation document

FRS FI3

Report on the investigation of an incident involving fire and/or explosion

Confirmation of competence outcomes

The Fire Investigator will be able to demonstrate:

1 The requirements for reporting on the investigation of incidents involving fire and explosion

Confirmation of Competence criteria

The Fire Investigator will be able to demonstrate how to:

1.1 Apply legal and organisational requirements for the recording and secure storage of information relating to incidents

1.2 Consider the purpose and importance of samples recovered from the scene in relation to the formulation of a report

1.3 Apply the contribution of fire and explosion debris analysis to a report

1.4 Consider the relevance of reporting the contribution of the structure, finishes, fittings, equipment and processes to the incident

1.5 Apply the relevance of reporting the contribution of Fire Safety measures and practice in relation to the incident

1.6 Apply the process for forming and testing hypotheses in relation to the scientific methodology

1.7 Apply the principles of developing and presenting a final hypothesis and conclusions

<p>2 How to evaluate the results of an investigation</p>	<p>2.1 Record information relating to the investigation in a way that supports validation and scrutiny</p> <p>2.2 Classify records and supporting information in a logical sequence for evaluation</p> <p>2.3 Review information to identify any adaptations to accepted working procedures and practices</p> <p>2.4 Analyse numerical data for its relevance and support to the investigation outcomes</p> <p>2.5 Clarify access to and availability of supplementary materials that support the report in accordance with the rules of disclosure</p> <p>2.6 Confirm records and supporting materials relating to the investigation are maintained in a durable and retrievable form</p>
<p>3 Be able to report the conclusions of an investigation</p>	<p>3.1 Confirm the report includes information that is accurate, current, valid and relevant to the investigation</p> <p>3.2 Confirm the report conforms to legal requirements with reference to case notes and related materials</p> <p>3.3 Present hypotheses and conclusions in clear and unambiguous terms</p> <p>3.4 Support conclusions with factual evidence and reasoned, impartial arguments</p> <p>3.5 Explain reasoning for discounting or eliminating specific hypotheses</p>

	<p>3.6 Produce the report in an agreed format</p> <p>3.7 Provide a disclosure list containing material not contained within the report</p> <p>3.8 Confirm receipt of report by all intended authorised recipients</p>
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FRS FI3 Knowledge and understanding

You need to know and understand:

- K1 how to collate, accurately record, document and securely retain all details of incidents
- K2 relevant legal and organisational requirements
- K3 fire/ explosion debris analysis and the value and importance of recovering samples from the scene
- K4 the actual contribution of the structure, finishes, fittings, equipment and processes to the incident
- K5 how to compile and evaluate information to form and test hypotheses
- K6 how to identify and act upon inconsistencies and consider alternative hypotheses
- K7 how to evaluate and interpret the results of examinations in order to present a final hypothesis and qualify conclusions
- K8 how actual Fire Safety measures and practice contributed to the incident

FRS FI4

Provide and present information for courts and formal hearings

Overview

This standard is about obtaining, preparing and presenting information, both verbal and written, for courts and formal hearings. It includes providing accurate and timely written information, respecting the needs and rights of individuals, their parents or carers and the victims of crime. It also involves making oral contributions at courts and formal hearings.

There are two elements

- 1 Provide written information for courts and formal hearings
- 2 Make oral contributions to courts and formal hearings

FRS FI4	
Provide and present information for courts and formal hearings	
<u>Confirmation of competence outcomes</u>	<u>Confirmation of competence outcomes</u>
<i>The Fire Investigator will be able to demonstrate:</i>	<i>The Fire Investigator will be able to:</i>
1 An understanding of the legal and organisation requirements relating to presenting evidence in court and at other hearings	1.1 Demonstrate or explain rules of evidence applicable to cases involving fire investigation 1.2 Demonstrate or summarise procedures, practice and protocols in courts and hearings involving fire investigation 1.3 Demonstrate or explain disclosure rules in relation to evidence and unused materials 1.4 Demonstrate or summarise key features of legislation, organisational requirements and guidelines in relation to presenting evidence in court and at other hearings

	<p>1.5 Demonstrate or explain reasons why it is important to present evidence in accordance with relevant legal and organisational requirements</p> <p>1.6 Demonstrate or explain the roles and responsibilities of the agencies and personnel involved in courts and hearings</p>
<p>2 An understanding of the requirements for providing evidence relating to fire investigations</p>	<p>2.1 Demonstrate or explain the importance in keeping up to date in own field of expertise</p> <p>2.2 Demonstrate or explain how opinion is used in courts and hearings in relation to fire investigation</p> <p>2.3 Demonstrate or explain how to compile factual statements and reports for use in courts and hearings</p> <p>2.4 Demonstrate or explain the importance of presenting evidence in courts and hearings which is consistent with written materials provided</p>
<p>3 Be able to prepare for court or other hearings</p>	<p>3.1 Demonstrate a prompt respond to any warnings, citations or notifications received from courts or other hearings</p> <p>3.2 Demonstrate the compilation of all evidence, including documents, notes, records and interview transcripts, in accordance with conventions for recording, labelling and presentation</p> <p>3.3 Demonstrate the maintenance of an audit trail of information and materials requested by and provided to the court or hearing</p> <p>3.4 Ensure the availability of relevant exhibits, maintaining their continuity and integrity at all times</p>

	<p>3.5 Demonstrate a review of all evidence in advance of the hearing in order to identify the relevant issues, facts and opinion</p> <p>3.6 Demonstrate liaison with agencies and individuals involved in the case</p>
<p>4 Be able to present evidence relating to fire investigations to court or other hearings</p>	<p>4.1 Demonstrate or explain, in accordance with court protocols, procedures and practices for attendance and behaviour when appearing at court</p> <p>4.2 Provide oral evidence that is consistent with written evidence provided as part of the case</p> <p>4.3 Provide opinion when requested based on the facts established in the investigation</p> <p>4.4 Respond to questions in accordance with court proceedings and protocols</p> <p>4.5 Liaise with court officials in accordance with court protocols</p>

Knowledge and understanding

You need to know and understand:

Legislative, regulatory and organisational requirements

- K1 legal and organisational requirements which relate to the provision of information at courts and formal hearings, and their impact for your area of operations
- K2 legislation, policies and procedures relating to data protection, health and safety, diversity and their impact for your area of operations
- K3 the role of your organisation and its services relating to providing and presenting information at courts and form
- K4 the role of your organisation's policy and procedures regarding confidentiality of information and the disclosure of information to third parties, and the specific circumstances under which disclosure may be made

- K5 the limits of your authority and responsibility, and the actions to take if these are exceeded

Working within the community justice sector

- K6 the functions, procedures and resources of the different courts, formal hearings and meetings relevant to this area of your work, including the appropriate administration and etiquette
- K7 the different forms of report which are required for the different courts and formal hearings relevant to your work, and the reasons for these
- K8 the ways in which it is necessary to alter communication when working with different individuals and representatives of different organisations
- K9 ways of identifying and addressing problems with the information

Consultation document

Appendix C: Examples of recognised CPD Activities

Activity (must relate to fire investigation / engineering)	Formal / Informal	Evidence required
In house training provided by your employer.	Informal	Details and information about the course must be provided in your CPD portfolio
Certificated In house training provided by your employer, where an assessment is successfully achieved.	Formal	Details and information about the course must be provided in your CPD portfolio
Attendance at a course/ seminar	Informal	The details of training provider must be provided in your CPD portfolio
Attendance at a course/ seminar where an assessment is successfully achieved.	Formal	The details of training provider must be provided in your CPD portfolio
Training provided by professional body / association	Informal	Details of the branch and the course must be provided in your CPD portfolio
Certificated training provided by professional body / association where an assessment is successfully achieved	Formal	Details of the branch and the course must be provided in your CPD portfolio
Reading relevant articles	Informal	The article title, publication and/or website address must be provided in your CPD portfolio.
Certificated distance learning courses to include e-learning where an assessment is successfully achieved	Formal	The details of the training provider and the course must be provided in your CPD portfolio
Academic or professional study	Formal	Full details of the qualification (subjects covered), the provider and the year of study must be provided in your CPD portfolio. Where study for qualification spans more than one year, this activity can be claimed for CPD purposes during each year of

		the qualification
Production of a dissertation	Formal	The title of the dissertation and the qualification details must be provided in your CPD portfolio. Where research and writing of a dissertation spans more than one year, this activity can be claimed for CPD purposes each year
Research	Formal	Full details of the topic for the research and, where applicable, the organization which has commissioned the research
Preparation and delivery of fire investigation training courses	Formal	Full details of the course being delivered must be provided in your CPD portfolio
Work shadowing	Informal	the work shadowing sessions to be provided in your CPD portfolio
Coaching or mentoring Which is delivered with clear aims and objectives for professional development.	Formal	Full details of aims and outcomes of the sessions to be provide in your CPD portfolio
Participation in development of specialist areas of fire investigation, by attending meetings of special interest groups/ committees or relevant organisations undertaking such work	Formal	Details of the committee/ organization, the area of fire engineering being considered to be provided in your CPD portfolio
Writing on fire investigation, to include material written for journals, publications, magazines, internet.	Formal	Full details on the subject of the piece of writing and, where applicable, the publication / website / organization for which the material is being produced must be provide in your CPD portfolio
<p>Important notice: This sample list is only an example and is not intended to exclude other worthwhile activities. It will be for you as an individual to demonstrate the development value of any activity in your Record of Professional Development.</p>		

Appendix D: Example CPD recording template

Summary of CPD activities				
Fire Investigator Name:				
Date	Time (actual)		Theme and activity	Learning points and how they can be applied
	Formal	Informal		

Note - Informal study activities are credited on a two for one basis that is two hours of informal study represents one hour of formal study