

Code of Practice for Investigators of Fires and Explosions for the Criminal Justice Systems in the UK

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Jointly endorsed by



CFOA
Chief Fire Officers
Association



THE INSTITUTION OF
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ASSOCIATION OF
FIRE INVESTIGATORS

This Code of Practice is jointly published and endorsed by the Chief Fire Officers' Association, the Institution of Fire Engineers and the UK Association of Fire Investigators.

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1. AIMS

- 1.1. The Code of Practice has been developed to support and provide guidance to organisations and individuals engaged in the examination of fire and explosion scenes within the framework of the criminal justice systems of the UK (England, Wales, Scotland and Northern Ireland).
 - 1.2. This guidance describes good practice for fire scene and (non-terrorist) explosion investigation.
 - 1.3. This document sets out:
 - 1.3.1. information for fire scene investigators outlining the appropriate understanding, knowledge and competencies required to undertake fire and explosion scene investigations within their particular area of expertise.
 - 1.3.2. a structured, systematic approach for the engagement of fire scene investigators within the investigative process such that their participation maximises the quality of the information obtained from the scene investigation assisting in the production of robust evidence for the criminal justice process.
 - 1.3.3. recommendations for scene investigation, specifically for the identification, recording, recovery, interpretation and presentation of specific types of evidence encountered, in accordance with applicable quality standards equivalent to those listed in the National Occupational Standards for fire investigation.
 - 1.3.4. recommendations and guidance for fire investigators on the minimum expectations and legal requirements placed upon them while investigating fire scenes within the UK criminal justice systems.
 - 1.4. Where this Code of Practice states that something “must” be done or is a “requirement”, this indicates a legal requirement (for example, in compliance with the Criminal Procedure Rules, especially Rules 1, 3 and 19 [1]). Where this Code of Practice states that something “should” be done or is “recommended”, this indicates preferred good practice. Regarding activities that “should” be done, other methods may be equally valid but investigators and organisations must be capable of demonstrating an equivalent standard of rigour, particularly where any statement is made regarding compliance with this Code of Practice. The use of any alternative methodology must be rigorously documented.
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2. SCOPE

- 2.1. This Code of Practice is directed only at fire investigation practitioners who undertake fire scene examinations and the reporting of their subsequent findings within the UK criminal justice systems.
- 2.2. The Code of Practice does not apply to activities where the sole purpose is determining the most likely origin and cause of the fire for the purposes of statistical returns for central government or for community fire safety responsibilities, for example by first responders (sometimes referred to as Level 1 investigations). However if, during such investigations, potential evidence is recovered, then the guidance relating to recovery, anti-contamination and continuity as presented in this Code of Practice must be followed, as a criminal investigation may be commenced at a later stage. It is recommended that, where organisations carry out activities for the purpose of statistical returns, policies and procedures should be developed to ensure preservation of evidence by those carrying out those activities. If for any reason the investigation becomes likely to be the subject of criminal proceedings, this entire Code of Practice will be relevant.
- 2.3. The Code of Practice does not include the chemical analysis of fire debris for ignitable liquids which is a laboratory activity requiring ISO 17025 accreditation [2].
- 2.4. The Code of Practice does not include examination of scenes which are identified as being related to terrorist activity or criminal misuse of explosives.

3. DEFINITIONS

- 3.1. **Competence:** The skills, knowledge and understanding required to carry out a role, evidenced consistently over an appropriate period of time through performance in the workplace.
- 3.2. **Critical Check:** A review carried out to assess the logic and cogency of the report (including checks of spelling and grammar). This review may be carried out by a competent fire investigator but should be carried out by someone unfamiliar with the contents of the report. The critical review is in compliance with the Forensic Science Regulator's code of conduct [3].
- 3.3. **Deployment to incidents:** The nature of deployment of fire scene investigators will depend upon the nature of the incident and the level of response required. This is a judgement made on a case by case basis by the organisation with primacy and/or agreed interagency arrangements. Incidents may require a low resource response, a technical specialist or a multiagency response to be deployed. In all cases, fire scene investigators must work within their areas of expertise and competence.
- 3.4. **Expert:** The decision whether a fire scene investigator is to provide expert evidence – whether in writing or in person is ultimately a decision for the judge alone to make. There are specific obligations placed upon expert witnesses and fire scene investigators acting in this capacity must understand and comply with these obligations. [1, 4-12]
- 3.5. **Fire scene investigators:** In the UK, fire scene investigators include practitioners from both the public (fire and rescue service, police, publically funded forensic science providers, academic and other public bodies) and the private sector (fire investigation organisations, private forensic science providers and other commercial organisations).
- 3.6. **Fire scene investigation:** In its broadest sense involves the identification, recovery, examination and interpretation of evidence related to a fire scene or a gas phase explosion, together with post fire/explosion damage to provide a determination (where possible) of the area(s) of origin of the fire/explosion, the most likely ignition mechanism involved and the mechanism by which a fire/explosion may have developed and spread.
- 3.7. **Instructing Authority:** This refers to the various organisations that may be responsible for leading or carrying out an investigation. In the case of prosecution activity, this is likely to refer to the organisation with Primacy for carrying out an investigation; where a death is involved this could be the Police or, in the case of Scotland, the Procurator Fiscal. In the case of defence activity, this is likely to refer to an instructing solicitor or advocate.

- 3.8. **Peer review:** A technical review carried out by a fire scene investigator (either from inside or outside a fire scene investigator's organisation) with competence equal to or greater than that of the author of the original report. The purpose of peer review is to scrutinise the technical findings of a report prior to it being served in a judicial process. Where a peer reviewer is not available, a critical check must be carried out instead.
- 3.9. **Specialist information:** Fire scene investigators may also provide information of a specialist nature such as the use of computer modelling of fire behaviour. Fire scene investigators may also recover items from fire scenes for the purposes of further laboratory based investigations.

4. NORMATIVE REFERENCES

- 4.1. The following normative references are included in the reference section. Those responsible for the implementation of this standard within their organisation should be familiar with and understand these documents:
1. Forensic Science Regulator (2016) Codes of Practice and Conduct for forensic science providers and practitioners in the Criminal Justice System, issue 3
 2. The Criminal Procedure Rules, October 2015, especially Parts 1, 3 and 19
 3. UKAS-RG 201:2013, Accreditation of Bodies Carrying Out Scene of Crime Examination (Edition 1)
 4. ILAC G19:08/2014 Modules in a Forensic Science Process
 5. IAF/ILAC-A4:2004, Guidance on the Application of ISO/IEC 17020
 6. BS EN ISO/IEC 17020:2012, General criteria for the operation of various types of bodies performing inspection
 7. BS EN ISO/IEC 17025:2005, General requirements for the competence of testing and calibration laboratories

5. INTRODUCTION TO THE CODE

- 5.1. Fire scene investigation is an opinion and evidence based interpretation process supported by a broad body of scientific and engineering knowledge.
- 5.2. Fire scene investigation demands a level of relevant scientific and discipline specific knowledge, skills and competence for an investigator to be in a position to determine the origin, cause and development of a specific event.
- 5.3. The recognition of the fire scene investigator as an expert witness is a matter decided upon by a judge, and fire scene investigators must recognize that they may be called to court to present evidence in this capacity and must be aware of the responsibilities and obligations of an expert witness.

6. GOOD PRACTICE

6.1. GENERAL

- 6.1.1. Competent fire scene investigators must be impartial and independent and undertake their investigative duties with professionalism, maintaining the confidentiality of all materials relating to their investigation within any interagency agreements or instructions from the investigating authority. Fire scene investigators may be requested to provide impartial, expert opinion evidence to a court. [1]
- 6.1.2. A fire scene investigator must be competent to proffer a professional opinion on the origin, cause and development of a fire within their area of expertise and must not overstep the boundaries of their expertise [1].
- 6.1.3. Fire investigations need to be undertaken following a systematic data gathering and investigative approach (widely known as the 'scientific method') accepted within the (UK) fire investigation community.
- 6.1.4. Recording items (evidence/exhibits) in situ, and documenting the recovery, packaging and labelling of exhibits, including their continuity, is essential [6,9,11,12].
- 6.1.5. The fire scene investigator is required to comply with disclosure obligations in terms of the requirements to record, retain, reveal and review all details and physical evidence related to their examinations. [1, 6,9,11,12]
- 6.1.6. Any equipment (including vehicles) used must be fit for purpose and where appropriate, validated for use. Equipment must be free of relevant contaminants. Consideration should be given to cleaning regimes for equipment and a written monitoring system maintained to demonstrate that cleaning has been undertaken should be considered. In addition, an assessment of each individual scene should be undertaken to ensure that suitable anti-contamination measures are in place and recorded given the circumstances of the case.
- 6.1.7. Samples recovered from a fire scene requiring chemical or other forensic analysis must be transferred to a laboratory where analytical testing conforms to the appropriate quality procedures (normally ISO/IEC 17025 [2]).

6.2. SCENE EXAMINATION

6.2.1. Area of origin

Determination of the origin of a fire or explosion involves an assessment of factors which may include (but is not limited to) indicators such as electrical evidence, witness evidence, burn and smoke patterns, the fire load, fire fighting activities and ventilation and temperature indicators. The basis for the interpretation of these factors is well documented in the professional literature. Support for the findings of the area of origin of the fire(s) should be documented as should all literature used to support such conclusions [1].

6.2.2. Cause

Identification of the cause of the fire must involve an assessment of all viable ignition sources in each individual case. This includes consideration of all realistic sources pertinent to the specific incident. Support for the inclusion or exclusion of a potential ignition source must be documented and evidenced as should all literature used to support such conclusions [1].

6.3. ESTIMATION OF UNCERTAINTY

- 6.3.1. Tests and measurements used in fire scenes are often indicative and not always quantitative.
- 6.3.2. The reliability (precision and accuracy), variability (statistical variance), errors and calibration related to any instrumental measurement or engineering method undertaken must be understood by the fire investigator [2,13,14].
- 6.3.3. Uncertainties in the forensic fire scene investigation process may arise from a number of sources taken into account on an individual basis in the interpretation and evaluation of a scene. Such areas include:
- competence of the investigator and their specific expertise and experience,
 - information received,
 - specific environmental conditions,
 - destruction of evidence due to the fire, fire suppression and/or firefighting,
 - clean-up or repair activities which have started prior to collection of all evidence.
- 6.3.4. These factors should be taken into account and documented in every case in the interpretation and evaluation of a scene [6,9,11,12].

6.4. ROLES AND RESPONSIBILITIES

6.4.1. The degree to which a fire scene investigator will be engaged in any investigation will be defined by their specific expertise [1] and documented in their terms of reference or interagency agreement.

6.4.2. Fire scene investigators' responsibilities include [15]:

1. understanding their role within the investigation and the investigative team,
2. understanding the potential for all evidence types which may be present at the fire scene,
3. understanding the relevant crime scene and laboratory procedures (including applicable PPE requirements) required to ensure the preservation, integrity, continuity and confidentiality of evidence as well as in support of applicable disclosure obligations,
4. ensuring that the methods used in the investigation of the fire scene are accepted by the mainstream fire investigation community or are peer reviewed (for example in the relevant scientific literature),
5. reporting and justifying in case notes or within their statement/report as appropriate, any variations of accepted fire scene investigation practice,
6. ensuring that their investigation does not adversely affect the requirements of other specialists at the scene but rather dovetails with other specialists to maximise the opportunities for the recovery of all available evidence at the scene,
7. exercising all reasonable professional skill and care to prevent avoidable danger to health or safety and to minimise any adverse effect on the environment,
8. ensuring the security and storage of all correspondence in electronic or physical format including text and images,
9. collecting relevant witness evidence,
10. understanding that any destructive examination may make the original observations unavailable for re-examination by other and such critical findings must be recorded,
11. making and retaining full, contemporaneous, clear and accurate records of the examinations undertaken. These should include (but are not limited to) the terms of reference, photographs, a scene plan detailing where items were located including, if appropriate, wiring diagrams,

scene examination strategy, the time tasks were undertaken, and exhibits/productions recovered. All records must be maintained in appropriate and secure storage and must be disclosed in their entirety, in a timely manner, when requested in accordance with disclosure obligations compliant with the Criminal procedures rules [1], or other applicable jurisdictional rules [6-9, 11,12].

12. writing statements and reports and attending court to give evidence if called upon to do so,
13. enabling appropriate peer review and critical checks of statements and reports [3],
14. presenting findings and evidential material in a logical, balanced, transparent and clear manner confining opinions to those based on personal skills, professional experience and knowledge,
15. ensuring a full understanding of the ethical standards required and the expectations and obligations of appearing as an expert witness for the courts [1]
16. understanding the disclosure obligations of witnesses [1,6,9,11,12],
17. presenting evidence in a fair, unbiased and impartial manner with honesty, integrity and objectivity [1],
18. taking all reasonable steps to maintain and develop professional competence, by demonstrating engagement in continuous professional development or other agreed competency framework, either through a professional body or through the workplace where appropriate [3],
19. alerting relevant authorities to any findings which may have implications for public safety, subject to any requirements of a criminal investigation,
20. ensuring (where appropriate) that professional indemnity insurance is in place.

6.5. PERSONNEL

- 6.5.1. It is recognised that fire scene investigators have a wide range of experience and background knowledge. Their training and knowledge can be arrived at through a wide ranging combination of qualifications, structured specialist training courses and experience. Irrespective of the means used, competent fire scene investigators must demonstrate the essential knowledge and skills equivalent to those listed in the National Occupational Standards for fire investigation [15].
- 6.5.2. Competence of staff should be documented. The organisation, or sole trader, should have clearly defined policies and processes for demonstrating on-going competence of staff.
- 6.5.3. Training records of staff undertaking the investigation of fire scenes should be kept and reviewed on an annual basis.

7. ESTABLISHING REQUIREMENTS

- 7.1. A briefing should take place where the fire scene investigator is informed of the incident and any background information that may be of relevance. This briefing may not always occur at the start of the investigation but should occur as early as practicable during the investigation. The content of the briefing should be recorded in the fire scene investigator's notes [3,15-19].
- 7.2. Any conflicts of interest must be declared and the resolution documented [6,9,11,12]. The terms of reference should be clearly stated and understood prior to commencement of the fire scene investigation. This may be for example via a forensic strategy meeting or an initial instruction, either in person, by telephone or in writing from the investigating authority.
- 7.3. The terms of reference for the fire scene investigation might include:
 - 7.3.1. information relating to the purpose of the requested examination, the expertise required, time frame and, if appropriate, a cost agreed.
 - 7.3.2. the availability of suitable resources, facilities, specialists or other equipment (e.g. aerial platform).
 - 7.3.3. establishing a reflective review stage for evaluation of progress or changes in priority against requirements to reflect additional information received.
 - 7.3.4. discussion and agreement of any limitations imposed on the investigation as a consequence of health and safety risk issues and necessary control measures.

8. CASE ASSESSMENT

Fire scene investigators attend many different types of scene including those where explosions or fatalities may have occurred. Because of the variety of scenes, other forensic practitioners and other specialists may also be a part of the investigative team and the fire scene investigator(s) should familiarise themselves with, and contribute to, the investigative strategy as applicable [15].

8.1. PRIOR TO INVESTIGATION AT THE SCENE

- 8.1.1. The fire scene investigator should note the names of the key people involved in the investigation and their role and work alongside the other investigative agencies in accordance with any agreed strategy. They must also establish the legal power under which they are operating (for example having written authorisation if required) [15-17].
- 8.1.2. Prior to any work being undertaken, the fire scene investigator must discuss and agree any limitations imposed on the investigation as a consequence of health and safety risk and necessary control measures and take responsibility for their own health and safety [15]. The scene risk assessment must be documented and brought to the attention of other investigators [15].
- 8.1.3. The fire scene investigator should document details of the scene perimeters, cordons, logs and common approach paths, if in place, and must ensure that they adhere to these.
- 8.1.4. The initial fire scene investigative strategy should be outlined and agreed between the investigating authority, crime scene manager or their representative and other specialists, being mindful of the potential for recovery of other types of evidence.

8.2. SCENE INVESTIGATION

- 8.2.1. It is recognised that scene investigation is a dynamic activity and as such the investigative strategy should be reappraised regularly and communicated to all relevant parties as the investigation progresses [13-15, 18,19].
- 8.2.2. The fire scene investigator is required for the purposes of disclosure to record their actions, decisions and observations, strategy, processes, any exhibits/productions (in Scotland) seized, etc. Records should include scene notes, scene plans, any photographs and wiring diagrams as appropriate. Note-taking should be contemporaneous. All documentation must be retained, listed and made available for disclosure purposes if required. Records should be supported by photography, although that may be undertaken by a different individual or agency [1,6,9,11,12,15].
- 8.2.3. Any equipment brought to the scene by the fire scene investigator must be calibrated (measurement equipment) and suitably cleaned and contamination free prior to commencing the investigation.
- 8.2.4. Any limitations imposed on the findings by the fire scene investigator as a result of restricted access at the scene (e.g. for safety reasons) should be recorded.
- 8.2.5. The fire scene investigator must follow and document a systematic data gathering and investigative approach to the scene investigation which is accepted by the profession as good practice and widely referred to as the 'scientific method'. This methodology is widely documented in the relevant literature.
- 8.2.6. The procedure used is a systematic process of gathering data relating to the fire under investigation. This process may include, but is not limited to the following activities:
- a preliminary external examination of the scene
 - a preliminary internal examination of the scene
 - a detailed external examination of the scene
 - a detailed internal examination of the scene
 - a scene reconstruction
- Not all of these processes may be necessary in every investigation.
- 8.2.7. Preliminary examinations should;
- provide a set of overview photographs of the scene,

- provide the fire scene investigator with an initial perspective of the scene, identify items of potential evidential value relating to the origin, cause and development of the fire as well as to the identification of other potential evidence,
- identify information which may need to be gathered from possible witnesses or other sources (for example CCTV, building plans etc.).

8.2.8. Detailed examinations should;

- identify and protect items of potential forensic evidence so that an assessment can be made of their relevance and that they can be recovered by practitioners competent to do so,
- ensure that the recovery of items is documented and recorded and that the items are packaged appropriately by practitioners who are competent to do so and in discussion with the investigating authority,
- include the systematic interpretation of the physical post fire indicators at the scene to identify the potential area of origin, being mindful that there may be more than one such area,
- involve a systematic and fully documented excavation as appropriate to the scene and in line with the requirements of the investigation and agreed terms of reference.

8.3. RETRIEVAL OF ITEMS FROM THE SCENE

8.3.1. Preservation, packaging, labelling and documentation

1. The fire scene investigator must have permission from the investigating authority to recover and remove items from the scene. Prior to removal of such items, they must be fully documented including *in situ* photography, with a measurement / comparison scale where appropriate.
2. Items must be packaged suitably and labelled uniquely such that each item can be unequivocally identified. This must be done in accordance with the requirements for sample integrity and continuity of evidence such that a chain of custody is in place. Any deviation from appropriate packaging material shall be documented along with the reason for the deviation.
3. The potential for contamination and cross-contamination must be assessed on an item by item basis and all possible safeguards put in place to minimise the possibility of contamination [15].
4. All packaging containing recovered items must be sealed at the scene.
5. An exhibit list of items recovered from the scene must be kept including recording who has responsibility for the items. These records must include details of when the items have been handed over to any other relevant agency.
6. Evidential continuity must be maintained at all times and clearly documented.

8.3.2. Transfer and transportation

1. The fire scene investigator should ensure that they witness the transfer of any items that they have recovered from the fire scene to another person or organisation and ensure there is a written record of this within their notes.
2. Any damage or potential for contamination during retrieval and transfer of items from the scene must be documented.

8.4. EXAMINATION OF ITEMS RETRIEVED FROM THE SCENE [15]

- 8.4.1. Examination of items (for example electrical appliances) must not be undertaken until the prioritisation of other evidence such as DNA and fingerprints has been fully discussed with the investigating authority [20].
- 8.4.2. Every effort should be made to notify all interested parties (for example practitioners engaged for the prosecution, defence or insurance industry) by the investigating authority undertaking or commissioning the examinations that such examinations are taking place and be provided with the opportunity to attend.
- 8.4.3. Anti-contamination precautions [15]
 1. Examination of items recovered from fire scenes should be undertaken in a well-lit and clean environment. Surfaces used for examinations must be clean and present no risk of contaminating the items being examined..
 2. Appropriate personal protective clothing, including gloves, must be worn.
 3. Equipment must be clean and contamination free prior to the examination of any items.
- 8.4.4. Examination
 1. The condition of packaging should be recorded and fully documented, including photographically where appropriate.
 2. The fire scene investigator should be aware of the potential needs of the defence or other experts when undertaking the examination of items and ensure that adequate and accurate documentation including photography is carried out prior to any destructive processes being undertaken. Destructive processes should be appropriately authorised and disclosed [6,9,11,12].
 3. Care should be used in handling more fragile items given that damage may occur during the examinations and when this does occur, it must be documented.

9. REVIEW OF CRITICAL FINDINGS

- 9.1. Critical findings are those which make a significant contribution to the conclusions in the case and can be subject to differences in interpretation by individual fire scene investigators.
- 9.1.1. All realistic hypotheses for the origin, cause and, if required, development of the fire and/or explosion should be stated.
- 9.1.2. Each hypothesis must be evaluated and the conclusions reached must be justified in light of the case circumstances and interpretation of physical evidence including subsequent laboratory examinations if applicable.
- 9.1.3. Critical findings and conclusions must be peer reviewed [3].

10. UNDERTAKING CASE REVIEWS

- 10.1. In some circumstances fire scene investigators may be asked to undertake a review of case-related materials such as photographs, fire investigation reports, witness statements and other documents.
- 10.2. Instructions may be provided by the investigating authority either in person, in writing or by telephone. In all cases the fire scene investigator should document:
 - 10.2.1. The name and contact details of the instructing authority.
 - 10.2.2. The terms of reference.
 - 10.2.3. An agreement of the items to be reviewed.
 - 10.2.4. The time scales under which the case review will be carried out.
 - 10.2.5. An agreement of costs if appropriate.
- 10.3. Should there be any conflict of interest, the fire scene investigator must raise and discuss this with the instructing authority.
- 10.4. A list of material required from other experts should be passed to the relevant individual (for example the disclosure officer or defence solicitor) at the earliest point to allow them to locate and pass on material which might be pertinent.
- 10.5. The fire scene investigator undertaking the case review at the request of the defence must understand their requirements in relation to disclosure.
- 10.6. Limitations imposed on the conclusions drawn by the fire scene investigator as a result of the method of examination of the evidence (photographs, written notes and reports) or as a result of restricted access at the scene (e.g. for safety reasons) must be communicated to the instructing authority.

11. CASE MANAGEMENT

- 11.1. A review must be undertaken to check that the investigating authority's requirements have been adequately addressed in accordance with the terms of reference [3].
- 11.2. All reports or statements must be peer reviewed prior to submission to the investigating authority [3].

12. REPORTING

- 12.1. The report must be signed and dated prior to submission.
- 12.2. Draft documents should be marked as such and left unsigned.
- 12.3. The report should be clear and easy to read. The summary and conclusions of the report should be easily understood by the layperson, to render it suitable for presentation in court. The use of technical terminology in the conclusions should be kept to a minimum with non-technical explanations of these terms given where they are felt to be essential.
- 12.4. The report should contain sufficient detail and precision for other fire scene investigators to be able to comprehend the significance of the results.
- 12.5. The report should make clear any assumptions made and limitations on the extent or reliability of the evidence assessed, and the significance of this on the results.
- 12.6. The fire scene investigator must not stray outside her/his area of expertise when writing the report.
- 12.7. The report should include any relevant illustrations such as a scene diagram and a selection of photographs and images according to the relevant jurisdictional requirement.
- 12.8. Reports must conform to the legal rules applicable within the specific jurisdiction within which the case is being tried and in particular to the Criminal Procedure Rule [1] if the case is conducted in England and Wales.
- 12.9. Reports must carry the relevant declarations and any caveats particularly relating to new information coming to light and how this may affect the fire scene investigator's opinions.

12.10. REPORT FORMAT AND SECTIONS

12.10.1. Many fire scene investigators will have their own reporting formats and standard operating procedure for reporting their investigations and findings. These must conform to the legal rules applicable within the specific jurisdiction within which the case is being tried for example the Criminal Procedure Rules [1] if the case is conducted in England and Wales.

12.10.2. Where such formats do not exist the report should include the following information, except where one or more does not apply in a specific case [1]:

- Introduction,
- Background,

- Details of the scene investigation undertaken,
- Findings including assumptions and limitations,
- Discussions including considerations of all relevant hypotheses,
- Conclusions,
- Non-technical summary if required,
- Bibliography and/or references used.

12.11. FINAL REVIEW AND CHECKING

12.11.1. Before signing and submitting the report it must be checked for typographical and grammatical errors. A critical check [3] on the conclusions through a peer review process must be undertaken to ensure that

- there is consistency within the report,
- any conclusions drawn are justifiable considering the information contained within the report
- the report is a complete and stand-alone document
- the report carries the relevant declarations and any caveats particularly relating to new information coming to light and how this may affect the fire scene investigators opinions.

12.12. SUBMISSION

12.12.1. The report should be produced as quickly as is practical within the specific circumstances of the case and within the agreed timescale.

12.12.2. Interim and supplementary reports may also be requested.

12.12.3. If there are any delays in producing reports the instructing authority should be informed.

12.13. STORAGE AND ARCHIVAL OF MATERIAL

12.13.1. All materials pertinent to the case must be stored and archived securely. This must include all unused material, for example written notes and photographs. An Index of unused material (material that may be relevant to the investigation that has been retained but does not form part of the case for the prosecution against the accused) should be compiled [6,9,11,12].

13. CASE RELATED CONFERENCES

13.1. The fire scene investigator should be prepared to:

13.1.1. Attend case conferences or meetings called by the instructing authority to discuss their findings, report or any other issues relevant to the case.

13.1.2. Discuss their findings and interpretations openly and in an unbiased manner including details of any further work which may in their view be required. They should be in a position to discuss alternative hypotheses given the facts provided and identify and summarise any areas of disagreement.

13.1.3. All such discussions should be documented fully.

14. DISCLOSURE

- 14.1. The fire scene investigator must ensure that they adhere to the obligations placed upon them by the instructing authority in relation to the disclosure of used and unused materials within the jurisdiction within which they are practicing [6,9,11,12].

15. ATTENDANCE AT COURT

- 15.1. The fire scene investigator must make themselves available to attend court when requested to do so, subject to previously declared period of absence [1].
 - 15.2. They must understand the obligations that they have to the court and the UK criminal justice systems [1,6,9,11,12]
 - 15.3. In particular they should:
 - 15.3.1. Ensure that they are well prepared and have reviewed their contemporaneous notes and report in advance of their appearance in court to give their evidence.
 - 15.3.2. Ensure that all relevant documentation, such as a copy of their report and contemporaneous notes, are taken to the court.
 - 15.3.3. Ensure that their appearance and behaviour is in accordance with standards expected by the courts.
 - 15.3.4. Deliver all evidence in a clear, audible, and comprehensible manner. They should avoid using overly technical language when answering questions and offer explanations for such language if required.
 - 15.3.5. Ensure a clear delineation between what is factual evidence and what is opinion evidence.
 - 15.3.6. Ensure that testimony given is in accordance with the contents of their written report
 - 15.3.7. Answer questions truthfully and impartially.
 - 15.3.8. Consider any alternative hypotheses that are presented to them, particularly in light of new facts that may emerge during the conduct of the trial.
 - 15.3.9. Ensure that any conclusions given are within their field of expertise.
 - 15.3.10. Attempt to bring to the attention of the court any evidence which appears to have been misunderstood or misstated by a lawyer.
 - 15.3.11. Be willing to enter into discussions with other specialists prior to attendance at court, with regards to confirming areas of agreement and/or to explore any differences in opinion that exist regarding findings and conclusions.
 - 15.3.12. Be prepared to change their opinion if the facts dictate it, and to state this change clearly to the court.
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16. REFERENCES

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