Draft ‘Statutory’ Code of Practice

Publication Draft – April 2022

This is a draft document which is likely to change. The text should not be considered to indicate the likely final content.

The Forensic Science Regulator Act 2021

This is the Code of Practice issued by the Forensic Science Regulator pursuant to the provisions of s2 of The Forensic Science Regulator Act 2021.

In accordance with the provisions of the Act this Code has been:

1. Prepared and published by the Forensic Science Regulator [as required by s2];
2. Approved by the Secretary of State [as required by s3(3)(b)] on [Date to be inserted];
3. Laid before Parliament by the Secretary of State [as required by s3(3)(b)] on [Date to be inserted];
4. Approved by the House of Commons [as required by s3(3)(c)] on [Date to be inserted]; and
5. Approved by the House of Lords [as required by s3(3)(c)] on [Date to be inserted].

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Introduction

1. Introduction

1.1 General

1.1.1 Forensic science is a critical and important part of criminal investigations and the administration of justice, not only to identify offenders and provide expert evidence to the courts, but it is one of the strongest safeguards against false allegation and wrongful conviction. Forensic science examinations carry significant risks and the consequences of a quality failure can be profound, particularly where there is a system rather than an individual failure. The former could lead to the review of hundreds or even thousands of results generated by a flawed technique or method. The purpose of forensic science regulation is to ensure that accurate and reliable scientific evidence is used in criminal investigations, in criminal trials, and to minimise the risk of a quality failure.

1.1.2 The model for regulation of forensic science in England and Wales is based on each forensic unit implementing and operating an effective quality management system that meets the requirements of this Code. This will provide the necessary control of processes and minimise the risk of quality failure.

1.1.3 By the early 2000’s forensic science organisations in the UK and overseas had developed quality management systems with a scope that covered a wide range of laboratory-based activities.

1.1.4 The key elements of an effective quality management system are;

a. Validation of techniques with a focus on understanding and managing the risk of quality failure;

b. Defining, demonstrating and testing the initial and ongoing competence of practitioners;

c. Having documented and controlled procedures, an internal audit process to ensure they are effective and being followed, complemented by processes that encourage and support continuous improvement;

d. Commitment from senior leadership; and

e. Enabling continuous improvement.

1.1.5 The establishment of an effective quality management system provides the basis for forensic units to produce reliable results and understand and manage the risk of a quality failure. Quality management systems in forensic units in the UK are, where accreditation is required, assessed by the United Kingdom Accreditation Service ® (UKAS ®) [1] against international standards and guidance, primarily BS EN ISO/IEC 17025:2017 [1] and BS EN ISO/IEC 17020:2012 [2] and ILAC G19:08/2014 [3]. Similar provisions will apply with other accreditation bodies.

1.1.6 The role of the non-statutory Forensic Science Regulator was established in 2007 [2] under the Royal Prerogative to set standards for forensic science and ensure compliance with those standards. This was achieved through the establishment of the Codes of Practice and Conduct [4], appendices covering different sectors of forensic science and general guidance documents. In 2011 [5] the House of Commons Science and Technology Select Committee called for the Forensic Science Regulator to be given statutory powers, it reinforced this in two further reports [6] [7] and the House of Lords Science and Technology Select Committee also called for statutory powers [8]. A Private Members Bill [9] to establish statutory powers for the Forensic Science Regulator was introduced in Parliament in 2020 and, following modification, the Forensic Science Regulator Act 2021 (the ‘2021 Act’) [10] received Royal Assent on 29 April 2021 [11]. [3]

1.1.7 The role of the Forensic Science Regulator (the ‘Regulator’ under the 2021 Act was introduced on ###.

1.2 The Forensic Science Regulator Act 2021

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1 The terms ‘United Kingdom Accreditation Service’ and ‘UKAS’ are registered trademarks of the United Kingdom Accreditation Service which is the national accreditation body for the United Kingdom.

2 Written Ministerial Statement of 12 July 2007 by Meg Hillier MP (then a Minister at the Home Office). [12]

3 On Royal Assent certain administrative provisions of the 2021 Act became law. All other provisions of the 2021 Act were to be brought into effect by Regulations issued by the Secretary of State [see s13 2021 Act [10]].

1.2.1 The 2021 Act [10] requires the Regulator to prepare and publish a code of practice about the carrying on of forensic science activities (FSA) in England and Wales. This document is the Code of Practice (the ‘Code’) required by Section 2 of the 2021 Act [10]. This Code builds on the non-statutory Codes of Practice and Conduct [4] incorporating much of their content.

1.2.2 The 2021 Act [10] introduced powers for the Regulator to intervene where there is reason to believe that a person [4] may be undertaking a forensic science activity to which this Code applies in a way that creates a substantial risk (that being a risk which is more than theoretical) [5] of;

a. Adversely affecting any criminal investigation, or

b. Impeding or prejudicing the course of justice in any proceedings. [6]

1.2.3 The powers introduced include one to investigate [see s5 2021 Act [10]] and one to require compliance [see s6 2021 Act [10]].

1.2.4 Every effort should be made by all those who work in forensic science to avoid the situation arising where there is an unacceptable risk to a criminal investigation or the administration of justice. The Senior Accountable Individual (see section 18) shall be accountable for compliance with the code and the monitoring and mitigation of the risk of quality failures. All forensic units which are subject to this Code issued under the 2021 Act [10] are, if the code requires accreditation, required to sign a confidentiality disclosure waiver to allow UKAS (and/or any other accreditation body the unit uses) to disclose any information to the Regulator.

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4 The term ‘persons’ is defined in The Interpretation Act 1978 [15] and that definition includes any ‘body of persons corporate or unincorporate’.

5 The term ‘substantial risk’ in the 2021 Act [10] has not yet been considered by the courts. The term is used in the Contempt of Court Act 1981 [108] and the meaning has been considered by the courts in that context. See, for example, Her Majesty’s Attorney General v. Express Newspapers [2004] EWHC 2859 (Admin).

6 Neither the investigations nor proceedings are limited to those in the Criminal Justice System in England and Wales.

1.2.5 The 2021 Act [10] makes further provision for the Regulator to require persons to provide copies of documents and other information in the person’s possession or control as part of a Regulator’s investigation.

1.3 The Code

1.3.1 This Code is based on the regulatory model historically (i.e. prior to the introduction of the 2021 Act [10]) in use for forensic science in England and Wales in that it requires each forensic unit to operate an effective quality management system and, where required by this Code, achieve and maintain accreditation to a suitable international standard and this Code. There are additions to this Code to cover the provisions set out in the 2021 Act [10] including Regulator’s investigations, issuing of compliance notices, issuing completion certificates, appeals and other functions of the Regulator. [7]

1.3.2 This Code applies to all those undertaking forensic science activities subject to this Code, whether individual practitioners, academics, public or private sector or forensic science units. These can be small teams in larger organisations, sole practitioners or large providers and can be commissioned by the prosecution or the defence.

1.3.3 This Code applies to forensic science activities undertaken for matters related to the Criminal Justice System in England and Wales. Future versions of the code can be applied to other jurisdictions and/or purposes by order of the Secretary of State [see s11(2)(c) of the 2021 Act [10]

1.3.4 This Code is not intended to be a substitute for the complete version of the international standards referred to. Section 45 of this Code cross references to the key clauses that appear in the normative references (see section 13.3); this is not intended to be a comprehensive analysis of the provisions. Forensic units applying for, or holding, accreditation to one, or more, of the international standards (issued by the International Organization for Standardization) remain

[7] The coverage of these issues in this Code is limited to what is needed to understand the operation of this Code. These matters are dealt with, in more detail, in relevant policy documents issued by the Regulator.

responsible for ensuring they are aware of all relevant requirements within, or related to, those standards.

2. Structure

2.1.1 This document is formed of several parts as set out below.

a. Part A - Sets out the legal background to this Code.

b. Part B - Provides a summary of the requirements established for each FSA.

c. Part C – Sets out legal issues related to this Code.

d. Part D - Sets out the standards of conduct.

e. Part E - Sets out the standards of practice.

f. Part F - Contains information which is general to this Code.

g. Part G - Contains appendices to this Code. These may contain, inter alia, the following.

i. Information about specific issues.

ii. Definitions of FSA (and other definitions relevant to the delineation of FSA).

iii. Standards and requirements which are relevant to a specific FSA or groups of FSAs.

iv. The means of demonstrating compliance with this Code relevant to a specific FSA or group of FSAs.

Part A – Legal Position

3. The Forensic Science Regulator

3.1.1 The 2021 Act [10] placed the Regulator on a statutory basis (as a new legal entity) and provided the Regulator with legal powers. Those include, but are not limited to, the power to:

a. Issue a code of practice;

b. Investigate concerns; and

c. Protect the CJS from poor practice in forensic science.

3.1.2 While the 2021 Act [10] makes no reference to ‘quality’ or ‘standards’ the Written Ministerial Statement, in 2007 [12], made clear that the role of the Regulator related to quality standards in forensic science. The explanatory memorandum [13] which accompanied the bill (which became the 2021 Act [10]) and the Parliamentary debates [8] on the bill were clear that the main aim of the bill was to transfer the then existing role to a statutory basis and provide additional powers.

3.1.3 The role of the Regulator therefore focusses on quality standards in forensic science as opposed to any other aspect of the provision of forensic science.

4. Basis of Appointment of the Forensic Science Regulator and Legal Powers

4.1.1 Those sections of the 2021 Act [10] which did not become effective on Royal Assent [see s13 of the 2021 Act [10]] were brought into effect by Regulations issued by the Secretary of State [see s13(4) of the 2021 Act [10]]. Those Regulations are as follows.

a. ### brought sections ### into effect on ###.

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[8] The debates on the bill were as follows. In the House of Commons - the first reading [110], the second reading [111], the money resolution [114], the committee stage [112] and the third reading [113]. In the House of Lords – the first reading [115], the second reading [116], the committee stage [117] and the third reading [118]. Royal Assent was recorded on the 29th April 2021 [11].

b. ### brought sections ### into effect on ###.

5. Employment Rights Act 1996 [14]

5.1.1 Under development

6. Forensic Science Activities

6.1 Legal Basis

6.1.1 The approach taken in the 2021 Act [10] [see s11] was to establish the concept of ‘forensic science activity’ (FSA). The definition adopted was, deliberately, one which could cover anything which might conceivably be considered forensic science. The 2021 Act [10] [see s2] requires that the Regulator defines the FSAs which are subject to the code. This places responsibility on the Regulator for defining, with sufficient clarity, what activities are FSAs subject to the code.

6.2 Definition

6.2.1 Section 11 of the 2021 Act [10] defines FSA as follows.

(1) In this Act “forensic science activity” means an activity relating to the application of scientific methods for a purpose mentioned in subsection (2).

(2) Those purposes are—

(a) purposes relating to the detection or investigation of crime in England and Wales;

(b) purposes relating to the preparation, analysis or presentation of evidence in criminal proceedings in England and Wales;

(c) such other purposes as the Secretary of State may specify in regulations made by statutory instrument.

6.2.2 At the time of publication of the first issue of this Code no regulations have been issued under the provisions of s11(2)(c).

6.2.3 The s11 definition is clearly a wide one which could cover a significant range of activities.

6.3 Limits on FSA

Link to Crime

6.3.1 The definition of FSA above, see section 6.2.1, makes clear that FSA must be undertaken for one of the purposes set out in s11(2) 2021 Act [10].

6.3.2 The definition refers to ‘crime’ rather than a specific crime so that the work does not have to be related to a specific offence or suspected offence.

6.3.3 The 2021 Act [10] uses the text ‘relating to’ which indicates the work does not have to be directly for the purposes stated.

Territorial Extent

6.3.4 The 2021 Act [10] imposes territorial restrictions. These are discussed in section 9.

Approach

6.3.5 The general requirements for FSAs (see section 49) are intended to give effect to the limitations set out above.

6.4 Levels

6.4.1 The 2021 Act [10] provides, see s2, that the Regulator shall issue a code of practice and, in that code, shall define which FSAs are subject to the code. The Regulator powers to investigate [see s5 2021 Act [10]] and issue compliance notices [see s6 2021 Act [10]] apply only to FSAs which are subject to the code.

6.4.2 In contrast, the Regulator powers to provide guidance [see s9(1) 2021 Act [10]] and provide advice [see s9(2) 2021 Act [10]] are available in relation to all FSA.

6.4.3 This means that the Regulator can define activities which might be considered forensic science (or some related field or undertaking) into levels as follows.

a. Activities which are not FSA.

b. Activities which are FSA, but which are not subject to the code.

c. Activities which are FSA and are subject to the code.

6.4.4 The Regulator can set different requirements for different FSA [see s2(2)(c) of the 2021 Act [10]].

6.4.5 The Regulator has no direct role in respect of those activities which are defined not to be FSA.

6.4.6 Where an activity is defined as an FSA the extent of the Regulator’s powers depend on whether it is subject to this Code. Where an FSA is not subject to this Code the powers in s9 2021 Act [10] apply. Where an FSA is subject to this Code then the powers for a Regulator’s investigation [see s5 2021 Act [10]] and enforcement [see s6 2021 Act [10]] also apply. [9]

6.5 Approach to FSA Definition

6.5.1 The 2021 Act [10], see s2(2)(a), requires that the code sets out which FSA are subject to the provisions of the code. The primary purpose of the definition of FSA in this Code is to satisfy that requirement. It follows that, in relation to any issue of the code:

a. A declaration that an activity is an FSA subject to the code is conclusive; and

b. A declaration that an FSA is not subject to the code is conclusive.

6.5.2 The FSA covered, and not covered, by the code may be different in future issues of the code.

6.5.3 Where an activity is not defined as an FSA in the code this is not conclusive as to the issue. Only a clear statement by the Regulator, in the code, or by regulatory notice, will achieve this.

6.5.4 The nature of FSAs means that the definitions of some FSAs may appear to overlap with other FSA definitions. To ensure it is clear what is covered, and which standards apply for each FSA the definitions may include exclusions. In some cases, these exclusions will make clear that activities which are not considered FSA are excluded from a particular definition. This means that some activities, which are not considered FSA, also have to be defined. These are set out in the appendices to this Code.

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9 The manner in which the powers in sections 5 and 6 2021 Act [10] apply is affected by the provisions of section 12 of the 2021 Act.

6.5.5 There are several aspects of the definition of FSAs which will be common across all, or most, definitions.

6.5.6 Section 51 of this Code sets out these general provisions and requirements which apply to all FSA definitions unless clear language to the contrary is included in a specific FSA definition.

6.6 Scope of FSA

6.6.1 A forensic unit which undertakes any part of an FSA is undertaking that FSA.

6.6.2 In general, a forensic unit which is carrying on an FSA is not required to deliver every aspect of the description of the FSA. However, there are FSAs where a service of an appropriate quality can only be delivered if a minimum set of the aspects are delivered. These are set out in the FSA definition in the corresponding appendix to this Code.

6.7 Restrictions

6.7.1 The definition of FSA in the 2021 Act [10] is, deliberately, wide enough to cover most areas where scientific methods [10] are used in the Criminal Justice System. In defining the FSAs which are subject to this Code the Regulator has focussed on those FSAs which have historically been considered forensic science.

6.7.2 In future editions of this Code the scope of activities which are covered by the code may expand.

6.8 Significance

6.8.1 The purpose of defining activities as FSAs is to delineate the remit of the Regulator. It is not intended, by itself, to make any comment on the nature or value of any activity (whether defined as an FSA or not).

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[10] The text in the 2021 Act [10] refers to ‘scientific methods’ as opposed to ‘scientific method’. The text of the Act is more general that any generally accepted definition of ‘scientific method’.

7. The Code

7.1 General

7.1.1 Section 2 of the 2021 Act [10] requires the Regulator to “prepare and publish a code of practice about the carrying on of forensic science activities in England and Wales”.

7.2 Limits on the Code

7.2.1 The 2021 Act [10] imposes territorial restrictions. These are discussed in section 9.

8. Transitional Provisions

8.1.1 To be developed

9. Territorial Extent

9.1 General

9.1.1 The 2021 Act [10] imposes restrictions on the territorial application of its provisions in two ways.

a. There are restrictions on the nature of FSA [see s11 of the 2021 Act [10]].

b. There are restrictions on the application of the code [see s2 of the 2021 Act [10]].

9.1.2 It is important to be clear that these are separate restrictions as they apply in different ways to different provisions of the 2021 Act [10].

9.2 Forensic Science Activities

9.2.1 The 2021 Act [10] creates a territorial limit to the scope of FSA by reference to ‘England and Wales’.

9.2.2 The terms ‘England’ and ‘Wales’ are defined in The Interpretation Act 1978 [15].

9.2.3 In relation to s11(2)(a) of the 2021 Act [10] the limit is taken to mean that the work must relate to crime in England and Wales. It imposes no restriction on where the FSA may be undertaken.

9.2.4 In relation to s11(2)(b) of the 2021 Act [10] the limit is taken to mean the criminal proceedings must occur in England and Wales. It imposes no restriction on:

a. Where the crime, or suspected crime, occurred; or

b. Where the FSA is undertaken.

9.3 The Code

9.3.1 The provisions of s2 of the 2021 Act [10] mean that this Code only applies to FSAs which are undertaken in England and Wales.

9.3.2 An FSA will, subject to the point in section 9.3.3 , be undertaken within England and Wales if the activity occurs within the areas covered in those definitions.

9.3.3 The following activities shall always be considered to occur in England and Wales regardless of the location of the forensic unit.

a. The reporting of the outcome of any activities; and/or

b. The provision of evidence (whether written or oral).

9.3.4 The definition of FSA also incorporates territorial restrictions. These are discussed in section 9 of this Code.

9.3.5 The Regulator may issue guidance [see s9(7) 2021 Act [10]] in relation to undertaking FSAs outside of England and Wales.

10. International Obligations

10.1.1 To be developed

Part B - Summary of Requirements

11. Overview of FSAs and Requirements

11.1.1 This section provides a summary of the requirements set out in the appendices for each FSA. This is a summary and, in the event of any inconsistencies with the content of the appendices shall prevail.

To be developed

Part C - The Code

12. Legal Basis

12.1.1 This document is the code of practice issued by the Forensic Science Regulator pursuant to the provisions of s2 of the 2021 Act [10].

12.1.2 Compliance with the provisions of the 2021 Act [10] is set out on page ###.

12.1.3 In accordance with s3(4) of the 2021 Act [10] the provisions of this Code come into force at 00:00:01 on [Date to be inserted].

13. General

13.1 Transitional Provisions

13.1.1 To be developed

Changes to the Code

13.1.2 This Code has, or in time will, replace the Codes of Practice and Conduct [4] issued by the non-statutory Forensic Science Regulator. This Code will change over time. The process by which this will occur is discussed in section 14 .

13.1.3 It is inevitable that there will be circumstances where the work on an individual case will occur over a timescale in which more than one issue of the code is in force.

13.1.4 All work should be performed in accordance with the Code which is in effect at the time the work was undertaken. There is no requirement to revisit work which has already been done if this Code changes. [11]

13.2 Scope

[11] Where a change in the code will not require a review of any work undertaken when a previous issue was in force the response to a quality issue may require such a review.

13.2.1 This Code applies to any forensic unit undertaking an FSA to which this Code applies. The FSAs which are subject to this Code are set out in the FSA definitions (see the appendices).

13.2.2 This Code specifies the requirements for competence for undertaking FSAs. Where relevant, appropriate legal, regulatory and information security provisions are included.

13.3 Normative References

13.3.1 The following normative references are cited in this Code and, in areas where accreditation to an international standard is required by this Code, form the basis of demonstration of compliance with the requirements of this Code. References:

a. BS EN ISO/IEC 17025:2017, General requirements for the competence of testing and calibration laboratories; [1]

b. ILAC-G19:08/2014, Modules in a Forensic Science Process; [3]

c. BS EN ISO/IEC 17020:2012, General criteria for the operation of various types of bodies performing inspection; [2]

d. ILAC-P15:07/2016, Application of ISO/IEC 17020:2012 for the Accreditation of Inspection Bodies; [16]

e. UKAS-RG 201:2015, Accreditation of Bodies Carrying Out Scene of Crime Examination (Edition 2); [17]

f. BS EN ISO 15189:2012, Medical laboratories. Requirements for quality and competence; [18] and

g. BS EN ISO/IEC 17000:2020, Conformity assessment. Vocabulary and general principles. [19]

13.4 Terms and Definitions

13.4.1 For the purposes of this Code, the definitions of terms are provided in section 0 – Glossary.

13.4.2 The meanings of abbreviations and acronyms are given in section 43 - Acronyms and Abbreviations.

13.4.3 The word ‘shall’ is used in this Code where the clause is a requirement; the word ‘should’ is used to indicate the clause is a recommendation based on generally accepted practice in the forensic science profession.

13.5 Application of Standards

The Code

13.5.1 This Code sets out the standards, and other requirements, which apply to each FSA. The standards/requirements may be different for each FSA. [12]

13.5.2 For each FSA this Code may demand compliance with any combination of the following.

a. The Standards of Practice contained in the main Code (i.e. not the appendices).

b. The Standards of Practice contained in one, or more, of the appendices to this Code.

13.5.3 For each FSA which is subject to this Code the requirements in this Code operate from the date this Code becomes effective (the date specified in section **12**). All forensic units must comply with the provisions of the Code from the effective date set out in section 12.

13.5.4 This Code may include provisions with regard to demonstration of compliance (either generally or for specific FSAs) which are not operative from the date this Code takes effect (i.e. the date may be set in the future). In these areas the requirements of this Code must be complied with from the effective date but the demonstration of compliance (e.g. by accreditation) is not required until the date specified. It is open to forensic units to achieve the requirement before the date specified.

[12] See section 2(2)(c) of the 2021 Act [10].

Non-Code Standards Documents

13.5.5 The Regulator may work with other bodies (e.g. professional bodies or regulators) to support the production of standards or requirements for certain fields of forensic science.

13.5.6 Unless such documents are incorporated into this Code, they do not form part of the code issued under the provisions of s2 2021 Act [10].

Other Documents

13.5.7 The Regulator may issue other documents (e.g. guidance documents). These do not form part of the code issued under s2 2021 Act [10].

13.6 Dealing with Changes to References

13.6.1 In this Code any reference to legislation (e.g. statute or secondary legislation) shall be taken to mean the following.

a. The legislation as amended.

b. Any secondary legislation created under powers contained within the statute.

c. Where the legislation is repealed and replaced the new provisions.

13.6.2 In this Code any reference to a Home Office Circular shall be taken to mean the following.

a. The Circular as amended.

b. If the Circular is withdrawn any Circular which replaces it.

13.6.3 In this Code any reference to a specific body (e.g. a Government department) shall be taken to mean the following.

a. The body regardless if the name is altered.

b. If the body is abolished, any successor body.

c. If responsibilities are transferred to another body to that body.

14. Modification

14.1 General

14.1.1 This is the first issue of the code.

14.2 Tracking

14.2.1 Subsequent issues of the code will adopt the following approach.

a. Significant changes from the previous issue will be highlighted in grey, significant deletions will be marked as “[deleted text]”.

b. Where sections are inserted, moved or renumbered, the subsequent renumbering of sections that follow will not generally be marked.

c. To comply with the Regulations on accessibility [20] the changes will be listed in a footnote to this section.

14.3 Approach

14.3.1 The Regulator will, under normal circumstances, modify this Code in the following manner.

a. The Regulator shall publish a notice of intent to modify this Code setting out the proposed changes. The proposed timescales for the changes will be set out.

b. The notice of intention to modify this Code will provide at least six months’ notice of the proposed changes.

c. The Regulator shall undertake a consultation, as required by the 2021 Act [10], on the proposed changes before finalising the changes which will be made to this Code.

d. The Regulator shall publish the Code which is to be submitted for approval under the provisions of s3 2021 Act [10].

e. Where common commencement dates have been introduced by HM Government for implementation of regulation consideration shall be given to the use of those dates.

14.3.2 While the above text sets out the normal approach it must be recognised that the role of the Regulator is, in part, to protect the CJS. Circumstances may arise where this process will not be followed.

14.4 Review

14.4.1 This document is subject to review at regular intervals. Comments should be sent to the address, or email provided, at: www.gov.uk/government/organisations/forensic-science-regulator.

15. Supremacy Provision

15.1 General

15.1.1 It may be necessary to publish a modified version of the code (e.g. a version in a different language or one addressing specific accessibility issues). If such a version is published, its nature as a secondary version of this Code will be made clear in the document. This may lead to the existence of a prime version and one or more secondary versions of the code.

15.1.2 In any case where there is a discrepancy between the wording of the prime and a secondary version the prime version shall prevail.

15.2 Online Publication

15.2.1 The code may be published online as both PDF and HTML versions.

15.2.2 In all cases the PDF version is to be taken as the definitive version of this Code.

Part D - Standards of Conduct

16. Standards of Conduct

16.1.1 The Regulator sets out, for all persons carrying on any FSA to which this Code applies (and this Code specifies compliance in the FSA definition), regardless of the source of the commission, the values and ideals the profession stands for. These Standards of Conduct provide a clear statement to commissioning parties, the Criminal Justice System and the public of what they have a right to expect.

16.1.2 As a person undertaking an FSA you shall:

1. Recognise your overriding duty is to the court and to the administration of justice. [21]
2. Act with honesty, integrity, objectivity and impartiality.
3. Comply with the legal obligations imposed on practitioners (and specifically expert witnesses) in the jurisdiction(s) in which you practice. [21]
4. Declare, at the earliest opportunity, any personal, business, financial and/or other interest, or situation, that could be perceived as a potential conflict of interest.
5. Act, and in particular provide expert advice and evidence, only within the limits of your professional competence.
6. Maintain and develop your professional competence, taking account of material research and developments within the relevant field.
7. Inform those commissioning you, in writing, of any information which may reasonably be considered to undermine your credibility as a practitioner or the reliability of the material you produce and include this information with/within any written report provided to those commissioning you.
8. Establish the integrity and continuity of items/exhibits as they come into your possession and ensure these are maintained whilst the items/exhibits remain in your possession.

9. Seek access to items/exhibits/information that may have a significant impact on the output from your work [13] and record both the request for the items/exhibits/information and the result of that request.

10. Conduct casework using methods of demonstrable validity.

11. Be prepared to review any casework if any new information or developments are identified that would significantly impact on the output from your work. [14]

12. Where you have grounds for believing a situation may result in a miscarriage of justice, ensure that the relevant commissioning party is informed either by (a) invoking the appropriate organisational processes for addressing potential miscarriages of justice or (where you do not operate as part of an organisation or the organisation does not have appropriate procedures) (b) by informing the party directly.

13. Preserve confidentiality unless the law obliges, a court/tribunal orders, or a commissioning party explicitly authorises disclosure.

16.1.3 Where this Code requires compliance with the Standards of Conduct, all practitioners shall comply with the Standards of Conduct and shall declare this compliance (or otherwise) as set out in section 38 .

13 Particularly conclusions reported in any report or in evidence.

14 Particularly conclusions reported in any report or in evidence.

Part E - Standards of Practice

17. Application

17.1.1 The Standards of Practice, subject to the point in section 17.1.2, apply to all forensic units undertaking an FSA to which this Code applies where compliance is specified in the FSA definition (see the appendices).

17.1.2 It is recognised that the Criminal Justice System may require the assistance of an expert who does not normally operate in the area of forensic science. Where such an expert is commissioned in relation to an FSA to which this Code applies and compliance with the Standards of Practice are required, the expert shall not be subject to the provisions of the Standards of Practice set out in the main Code but shall comply with the provisions of section 47.2 (which discusses the relevant provisions with regard to Infrequently Commissioned Experts).

18. Management Requirements

18.1 General

18.1.1 Where this Code specifies accreditation for an FSA, the forensic unit shall have a Schedule of Accreditation covering compliance with the standards identified in this Code for the aspects of the FSA it undertakes. Provisions in this Code vary this requirement with regard to Infrequently Commissioned Experts (see section 47) and/or where the provisions for infrequently used methods apply (see section 30.3.49 et seq).

18.1.2 The forensic unit shall define all roles that could influence the performance of the FSA undertaken and detail the competencies (see section 28.3) required for these roles. Where the role is supporting the delivery of the FSA but are not directly undertaking the FSA (e.g. cleaning personnel with access to examination areas), role specific awareness training should be given (e.g. security, confidentiality, integrity, contamination control) and documented.

18.1.3 These roles include all those performing the following as part of an FSA or identified as influencing the undertaking of the FSA.

a. Support services e.g. cleaning of examination areas.

b. Planning and performing inspection activities.

c. Planning and performing tests, including sampling.

d. Operating analytical instruments/equipment.

e. Performing critical findings checks and peer review.

f. Signing/issuing reports.

g. Providing interpretations/opinion.

h. Software installation, authorisation for software changes and administration of firmware and software (e.g. analytical software, anti-malware software).

i. Development, validation, and verification of new, adopted or adapted methods.

18.1.4 Where top management is referred to in relevant normative references (see section 13.3), this should usually be at Chief Officer or board level and, in this Code, is referred to as the Senior Accountable Individual (see 18.2).

18.2 Senior Accountable Individual

Appointment

18.2.1 Where a forensic unit is comprised of two, or more, practitioners it shall appoint a senior manager (that being at director, partner, board level, chief officer level or equivalent) to be the Senior Accountable Individual.

18.2.2 Where a forensic unit is comprised of only one practitioner that practitioner shall be the Senior Accountable Individual.

Role

18.2.3 The Senior Accountable Individual shall be accountable for the strategic leadership of the forensic unit’s compliance with this Code and be accountable for any risks related to any FSA undertaken by, or under the control of, the forensic unit. There should be particular focus on any risks which could adversely affect a criminal investigation or impede or prejudice the course of justice in any proceedings.

18.2.4 The 2021 Act [10] makes provision for circumstances where the Regulator has reason to believe that a person may be undertaking a forensic science activity to which this Code applies in a way that creates a substantial risk of: [15]

a. Adversely affecting any criminal investigation, or

b. Impeding or prejudicing the course of justice in any proceedings. [10]

18.2.5 The Senior Accountable Individual shall be accountable, on behalf of the forensic unit, in relation to any Regulator’s investigation or compliance action by the Regulator. [16]

18.2.6 The Senior Accountable Individual shall have the authority to make decisions and deploy resources to address quality matters in the forensic unit.

18.2.7 The name, and contact details, of the Senior Accountable Individual shall be notified to the Regulator. The Senior Accountable Individual will be the route through which any communications related to action under sections 5 and/or 6 of the 2021 Act [10] will be addressed. [17]

18.2.8 The forensic unit shall promptly (and in any event within 30 days) notify the Regulator, of any change in the information provided about the Senior Accountable Individual.

Requirements

18.2.9 The forensic unit shall have a document setting out the following for each Senior Accountable Individual.

a. The name of the Senior Accountable Individual.

b. The date of appointment of the Senior Accountable Individual.

c. The responsibilities of the Senior Accountable Individual.

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15 The term ‘substantial risk’ in the 2021 Act [10] has not yet been considered by the courts. The term is used in the Contempt of Court Act 1981 [108] and the meaning has been considered by the courts in that context. See, for example, Her Majesty’s Attorney General v. Express Newspapers [2004] EWHC 2859 (Admin).

16 The responsibilities of the forensic unit in relation to investigations and compliance action by the Regulator are discussed in section 25.3 of this Code.

17 The role of the Senior Accountable Individual does not require that all communications between a forensic unit and the Regulator go through that individual.

18.2.10 The document shall demonstrate that the Senior Accountable Individual was aware of the role and responsibilities from the date of appointment.

19. Business Continuity

19.1.1 The forensic unit shall have procedures to be implemented following interruption to, or failure of, business critical processes, to maintain or restore operations and ensure availability of information (at a level which prevents significant interruption to operations), and both confidentiality and integrity of that information. [18] [19]

19.1.2 The business continuity procedures shall include:

a. An IT incident management plan for retrieval of critical data (see section 32 - Control of Data; and

b. Consideration of what additional supporting information would be required to support case file data (e.g. validation reports, calibration records).

19.1.3 A forensic unit may need to use externally provided services in the undertaking of all (or any part of) an FSA (see section 24). The commissioning forensic unit should ensure that its business continuity procedures include provision to preserve and/or recover any material transferred to (or generated in) the facility commissioned to perform the work. Where externally provided services are performed by a separate legal entity, these business continuity procedures should include the safeguards should that legal entity go out of business with no legal successor (e.g. through stipulation in a contract with the legal entity in question to assist in receivership disputes).

19.1.4 The business continuity procedures shall be tested, for each area of work and/or site, at least once in a four-year cycle and the results documented. [20]

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[18] Further guidance, if required, can be obtained from ISO 22313:2020 Security and resilience — Business continuity management systems — Guidance on the use of ISO 22301. [124] [126]

[19] Commissioning parties should ensure that its own business continuity plans have addressed the risk that a provider goes out of business with no legal successor, to ensure retained material, case files and associated paperwork is available (e.g. continuity and access records, validation records, competency records, calibration and maintenance records). Ideally this should be through stipulation in a contract, clarifying that copies of certain information need to be supplied with the case files.

[20] This should be scaled based upon risk, in some circumstances a desk-top exercise may be justifiable.

Any identified need for action to modify the plans shall be implemented and the plans re-tested.

20. Independence, Impartiality and Integrity

20.1.1 The forensic unit shall ensure that all of its practitioners are made aware of, and adhere to, the Standards of Conduct in respect of their independence, impartiality and integrity, and that the organisational structure, policies and procedures support this rather than hinder it.

20.1.2 Conflicts of interest, perceived or otherwise, and threats to impartiality may include a practitioner:

a. Having, or being perceived to have, an interest in the outcome of the case;

b. Being coerced or having the perception of being coerced, openly or secretively; [21]

c. Being asked to disregard critical findings that support/undermine either the prosecution’s or the defence’s position;

d. Being asked (except where there is a clear legal reason for doing so) to limit the information being provided to the court including, but not limited to, findings that contradict any issued report(s);

e. Being the sole reviewer of their critical findings;

f. Being involved with activities that could be perceived as witness coaching or being coached, rather than training or familiarisation;

g. Being over-familiar with, or trusting, another person instead of relying on objective evidence;

h. Having organisational and management structures that could be perceived to reward, encourage or support bias;

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[21] The question of perception may be judged by reference to the test for apparent bias of members of the judiciary. In Magill v. Porter [2001] UKHL 67 the court noted “[The Court] must then ask whether those circumstances would lead a fair-minded and informed observer to conclude that there was a real possibility that the tribunal was biased”.

i. Having a close/significant personal or financial relationship with a party likely to be affected by the outcome of:

i. The practitioner’s work; and/or

ii. The case;

j. Having a close/significant personal or financial relationship with any person acting as an expert witness in the case; or

k. Acting in self-interest.

20.1.3 It is possible for a conflict of interest to arise as a result of information held by a practitioner. This could be information, perhaps obtained from other parties to the case or previous dealings with some of the parties, making it difficult for the practitioner to adhere to their obligations to the CJS or their client.

20.1.4 Practitioners giving evaluative opinion should interpret the evidence in light of the propositions set out by all parties and provide evidence in a balanced manner.

20.1.5 The required policies and procedures aim to prevent internal and external influence on the results of the FSA performed. As part of the process map required to assure data integrity (see 32.1.2), the level of information available to a practitioner relevant to the analysis at each stage of an FSA should be assessed and if appropriate controlled. [22]

20.1.6 The required policies and procedures should also cover the corrective action (such as formal disclosure) to be taken if there is a possibility of a practitioner’s judgement having been, or perceived to have been, compromised (see also 40 - Retention, Recording, Revelation and Disclosure).

21. Confidentiality

21.1.1 The forensic unit shall have documented policies and procedures detailing confidentiality (or equivalent) [23] requirements, including any disclosure

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22 The process map should assess the risk of cognitive bias, the Regulator has published further guidance on this issue. [24]

23 These include any statutory restrictions on the use of information.

requirements, and shall ensure that those requirements are applied to any externally provided services. The procedures shall address the following.

a. The material held by the forensic unit which is subject to an obligation of confidentiality.

b. The nature of the confidentiality obligation and its application to all personnel and external service providers.

c. The potential legal liability for breach of confidentiality.

d. The conditions that may allow the confidentiality to be waived or legally overridden and the process the forensic unit shall follow in such circumstances.

22. Document Control

22.1.1 The forensic unit shall apply document/version control procedures to the following where they are integral to the forensic process, including but not limited to:

a. Both hard copy and electronic copies;

b. Procedures – technical and quality;

c. Software;

d. Technical methods;

e. Forms;

f. Locally held copies of key external documents; and

g. Statutory documents (e.g. licences for possession of materials such as drugs or firearms).

22.1.2 The retention period for obsolete/superseded documents should be defined and should take into account commissioning party [22], regulatory [24] and legal requirements. [25]

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[24] For example the Code of Practice issued under the provisions of s23 Criminal Procedure and Investigations Act 1996 [102] and the requirements of this Code.

[25] Some documents, such as standard operating procedures or validation reports, may be required for the life of the techniques and a blanket 30 years is often applicable from the last time the technique they refer to was used and/or reported.

23. Review of Requests, Tenders and/or Contracts

General

23.1.1 This is the formal process of agreeing and recording the commissioning party’s and forensic unit’s interaction when requesting or tasking. Typically, where the commissioning party is external to the forensic unit, a commercial arrangement is entered into. With internal parties this may be a request managed through some other work order control system. This Code does not seek to govern how commercial arrangements are entered into, only how work is controlled, and instructions are captured.

23.1.2 The processes surrounding the review of requests, tenders and/or contracts may occur at several different levels and at several key stages through the processing of forensic work.

23.1.3 The issues to be addressed shall include how the following will apply before the work commences.

a. Whether the forensic unit can legally perform the work (e.g. does it have all required licences etc).

b. Whether the forensic unit meets the standards required for the work and the necessary means of demonstrating compliance.

c. Whether the practitioners have the level of background checks (e.g. security checks) the commissioning party requires for the work (see section 28).

d. Whether the proposed work would properly address the issues for the CJS.

23.1.4 A documented policy is required, which shall include recording of all relevant instances when work requirements are discussed and reviewed such that a demonstrable audit trail, including appropriate justifications and authorisations, is available for each piece of work undertaken.

Developing a Forensic Strategy

Under development

Evaluative Opinions

23.1.5 Where the forensic unit is commissioned to provide evaluative opinions the following provisions of this section apply.

23.1.6 The expert needs sufficient case-specific information to determine appropriate propositions, select appropriate analyses and to interpret the observations from those analyses. Other than that information, the expert does not need, and should not see, any more case-specific information (such as information on previous convictions, reasons unrelated to the scientific analysis why investigators have identified a suspect and any other extraneous information not relevant to the expert’s task). [23]

23.1.7 The expert shall:

a. Consider the questions being asked by the commissioning party in the case and identify the issue(s) their analysis can address;

b. Consider all available, relevant case-specific information and, where necessary, request additional information; and

c. Discuss the issues to be addressed and potential propositions with the relevant commissioning party and where possible the other party. [26]

23.1.8 On the basis of the case circumstances and any agreed key issue(s), the following, where they have been put forward by the prosecution and defence (or their representatives) shall be identified.

a. The prosecution proposition(s).

b. The defence proposition(s).

23.1.9 There may be more than two propositions, but the assessment will, in general, consider the propositions in pairs; each pair shall be mutually exclusive.

24. Externally Provided Products and Services

24.1 Externally Provided Services

24.1.1 A forensic unit may obtain services from outside the forensic unit (externally provided services) [27] as part of the undertaking of all, or any part, of an FSA.

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26 It is recognised that this may not be routinely possible in volume crime case work.

27 Externally provided services can be obtained through any model (contractual or otherwise) including subcontracts.

This section applies to any externally provided service which could directly affect the quality of the forensic unit’s undertaking of an FSA.

24.1.2 The use of externally provided services, as described in the paragraph immediately above, shall only occur if the commissioning party has agreed in advance. The forensic unit commissioning the work shall, as relevant to the FSA, ensure that:

a. All FSA related work meets the requirements set out in the FSA description;;

b. All FSA related continuity, security and recording requirements are met; and

c. The provider of the external services has all required licenses and/or approvals necessary to perform the work (see section 24.1.6).

24.1.3 The forensic unit obtaining the externally provided services remains responsible for the overall quality of the work, including that of any external element. [28]

24.1.4 Forensic units shall have a procedure for and retain records: [29]

a. Defining, reviewing and approving the forensic unit’s requirements for using externally provided services;

b. Specifying the requirements of the services to the external provider; and

c. Ensuring that external providers conform to relevant requirements of this Code.

24.1.5 Forensic units intending to obtain external services related to the undertaking of any FSA, or part of an FSA, which is subject to this Code shall include in its business continuity procedure the arrangements that have been made to preserve retained material [30] should their external provider or its contracted storage facility cease business and have no legal successor.

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28 Clearly an externally provided service is likely to be subject to contractual obligations, if the externally provided service is a forensic science activity which is subject to this Code, the external provider will also be subject to this Code.

29 Forensic units conducting activities which require accreditation to ISO 17025 [1] should note that although there is overlap with the standard’s clause 6.6 Externally Provided Products and Services, the standard has wider requirements which also apply.

30 Including relevant data, reports and records.

24.1.6 Where any externally provided work is subject to any requirement for approvals or licences established by law, rules or convention, (such as work connected to firearms examination, child exploitation, drug analysis or for inclusion on the National DNA Database ® [31]), the external provider must be appropriately approved or licensed.

24.2 Externally Provided Products

24.2.1 Forensic units shall ensure that any consumables, sampling/collection kits, packaging and/or chemicals they use are fit for purpose. [32] Demonstration of fitness for purpose of externally provided materials is through initial validation and/or appropriate quality assurance of materials used in the method.

25. Quality Issues

25.1 Control of Non-Conforming FSA Related Work

25.1.1 The forensic unit shall have policies and procedures to identify non-conforming work and, in addition, policies and procedures that are implemented when non-conforming work is identified.

25.1.2 Non-conforming work refers to any aspect of the forensic unit’s work in the undertaking of the FSA that does not conform to the forensic unit’s policies, procedures, or customer expectations.

25.1.3 Examples of non-conforming work include are not limited to, significant instances of: [33]

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31 The National DNA Database is a registered trademark of the Secretary of State for the Home Department.

32 The manner in which this can be demonstrated may include consumable manufacturers and kit assemblers meeting the requirements set out in the Publicly Available Specification (PAS) 377:2012 Specification for consumables used in the collection, preservation and processing of material for forensic analysis - Requirements for product, manufacturing and forensic kit assembly [109] and/or BS ISO 18385:2016 Minimising the risk of human DNA contamination in products used to collect, store and analyse biological material for forensic purposes [122].

33 An issue is significant if it meets the test set out in section 25.1.6.

a. Unexpected performance in proficiency testing/inter-laboratory comparison (see 37.1 - Inter-Laboratory Comparisons (Proficiency Tests and Collaborative Exercises));

b. Unauthorised access to restricted areas or information;

c. Missing or compromised items/exhibits and/or case files;

d. Equipment failing to receive timely calibration or maintenance;

e. Staff failing to follow procedures or norms of integrity that impact on quality;

f. Judicial criticism;

g. Potential criminal activity by staff;

h. Withdrawal of security clearance from staff;

i. Contamination incidents which may have an adverse impact on the CJS (e.g. those not identified through the use of quality controls within the method); [34]

j. A technical method being found to be producing erroneous results;

k. Any standards/reference materials, equipment or reagents being found to have defects or deficiencies; or

l. Anything likely to cause a disruption to the provision of service at the expected quality, including but not limited to, removal/suspension of accreditation.

25.1.4 The forensic unit shall maintain a record of non-conformities which:

a. Is capable of being used to identify trends;

b. Includes any concessions obtained to use non-conforming work;

c. Includes any review reports (e.g. root cause analysis);

d. Details any corrective and/or preventive actions taken;

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[34] Where contamination incidents which are detected by the routine safeguards do not normally warrant notification to the Regulator a significant number of such events may indicate an underlying issue worthy of reporting.

e. Details reviews of opportunities where similar non-conformances may occur and the preventative actions taken;

f. Record any evaluation of the corrective action; and

g. Is retained in line with the case file retention period.

25.1.5 Initially the significance of a non-conformity in relation to the impact on the results shall be evaluated and its root cause identified. This review shall include assessment of any impact on casework already reported, remedial action required on the individual non-conformity as well as whether the root cause analysis points to wider systemic issues which could indicate risk of reoccurrence or previously unidentified occurrence.

25.1.6 The forensic unit shall inform the Regulator about any non-conforming work if it has potential to significantly disaffect the commissioning party such that it could attract adverse public comment, be against the public interest or lead to a miscarriage of justice, and the Regulator shall be provided with a report on the review of the non-conformity. [35]

25.2 Complaints

25.2.1 The forensic unit shall have policies and procedures for dealing with complaints. These procedures shall define what constitutes a complaint in relation to the work undertaken by the forensic unit and shall ensure that appropriately scaled reviews are instigated on receipt of any complaints.

25.2.2 The forensic unit shall inform the Regulator via fsrenquiries@homeoffice.gov.uk or to the address given at www.gov.uk/government/organisations/forensic-science-regulator at the earliest opportunity about any complaint or non-conforming examination and/or test if it has significantly disaffected the any relevant party [36] such that it could attract adverse public comment, be against

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35 The Regulator shall be informed at the earliest opportunity once a reportable issue has been confirmed as a quality failure rather than after a potentially prolonged review. Basic information on the incident and likely timescale for the review is often all that is needed at the notification stage.

36 The term ‘relevant party’ means any person who is a party in the case (e.g. the prosecution and the defence), any person directly involved in the use of the output (e.g. law enforcement bodies, the Criminal Cases Review Commission) or the CJS.

the public interest or lead to a miscarriage of justice. The policies and procedures relating to complaints shall also indicate the escalation criteria and the individual/role holder responsible for notifying the Regulator.

25.2.3 Reviews prompted by complaints shall include examination of the potential impact on any work that has already been completed by the forensic unit. In the event that it is shown that there could have been an impact on any previous work this should be dealt with through the non-conforming work process (see 25.1 - Control of Non-Conforming FSA Related Work).

25.2.4 The forensic unit shall retain records of all complaints and of the subsequent reviews and outcomes in line with the case file retention period. Where the complaint has been referred to the Regulator, a copy of the report on the finding of the review shall be provided to the Regulator.

25.2.5 Complaints may be received from many sources including the commissioning party, persons professing to be victims of crime, police forces, and other departments within the same forensic unit and the judicial system (including adverse court decisions pertinent to the work).

25.3 Regulator’s Consideration of Quality Issues

General

25.3.1 The Regulator may become aware of quality issues in a forensic unit in several ways. These include, but are not limited to, the following.

a. Notification by a forensic unit under the provisions of section 25.1.6

b. Notification by a forensic unit under the provisions of section 25.2.2 ;

c. Notification by a third party; and/or

d. Information in the public domain (e.g. a court judgment or media reports).

25.3.2 The Regulator’s response to such quality issues depends on the nature of the issues and their potential impact. The options include, but are not limited to, the following.

a. To work with the forensic unit as part of the normal quality monitoring process to determine the nature of the issues and the appropriate response to reviews into non-conforming work.

b. To initiate a Regulator’s investigation under the provisions of s5 2021 Act [10].

c. To initiate compliance action under the provisions of s6 2021 Act [10].

25.3.3 The manner in which the Regulator deals with the appropriate response is set out in the published policy ### [24].

25.3.4 The following parts of section 25.3 sets out what the Regulator expects of forensic units when any quality issues are being considered by the Regulator.

Monitoring of Quality

25.3.5 Where the Regulator is considering a potential quality issue in a forensic unit, once the forensic unit is notified of this the forensic unit shall:

a. Co-operate with the Regulator to the maximum extent possible;

b. Provide, as far as permitted by law, all information sought by the Regulator, or potentially relevant to the Regulator’s consideration; and

c. Ensure sufficient resources are employed to address the issue in a suitable timescale.

Regulator’s Investigations [s5 2021 Act [10]]

25.3.6 Where it is appropriate to initiate a Regulator’s investigation into any aspect of the work of a forensic unit the forensic unit shall (when notified), in addition to the requirements set out above in relation to monitoring (see section 25.3.5):

a. Familiarise itself with the provisions of s5 2021 Act [10];

b. Ensure that all representatives involved in the Regulator’s investigation are:

i. Aware of the provisions of s5 2021 Act [10];

ii. Aware of the potential consequences of non-compliance with notices issued under s5 2021 Act [10].

Compliance Action [s6-8 2021 Act [10]]

25.3.7 Where the Regulator initiates compliance processes in relation to any aspect of the work of a forensic unit that unit shall (when notified), in addition to the requirements set out above in relation to monitoring (see section 25.3.5):

a. Familiarise itself with the provisions of sections 6-8 2021 Act [10];

b. Ensure all representatives involved in the Regulator’s investigation are:

i. Aware of the provisions of sections 6-8 2021 Act [10];

ii. Aware of the consequences of non-compliance with any notice issued.

Reporting

25.3.8 The existence of a Regulator’s investigation or compliance action (i.e. the issue of a compliance notice, the application for and/or granting of an injunction, the initiation of contempt proceedings or finding of contempt) may need to be disclosed in reports. Similarly, the fact that a Regulator’s investigation or compliance action has previously taken place may need to be disclosed in reports. This is discussed in section 38.4.

26. Control of Records

26.1 General

26.1.1 The forensic unit shall establish retention times that satisfy the requirements of legislation, [37] its accrediting body, the party commissioning the work [22] and this Code.

26.1.2 Records shall be stored and subsequently disposed of in a manner appropriate to their sensitivity and/or protective marking (e.g. incinerated or shredded to a specified standard which has been notified to the commissioning party).

26.1.3 Protective marking (e.g. with a Government Security Classification [25]) does not, by itself, provide an exemption to disclosure obligations. [26]

26.1.4 Where records are distributed across systems and/or locations, the forensic unit shall have a procedure to be able to retrieve and collate records required for reporting cases. The procedure shall detail the data types covered (see also procedural requirements in 32 - Control of Data).

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[37] At the time of issue of this Code, the relevant requirements are set out in the Code of Practice issued under the provisions of s23 Criminal Procedure and Investigations Act 1996 [102].

26.2 Technical Records

26.2.1 As a minimum, the technical records [38] shall contain all relevant information relating to the following.

a. The collection and movement of material (physical items/exhibits, data and records), including:

i. The date on which the material was taken or received;

ii. The date of subsequent movement of the material to another party;

iii. From whom or where and to whom or where the material was moved; and

iv. The means by which the material was received or passed from/to another party (see 36 - Handling of Items/Exhibits).

b. Sufficient relevant detail to be able to trace any analytical output to:

i. A specific instrument;

ii. Instrument configuration, e.g. software version or, if relevant, firmware;

iii. The operator; and

iv. The date of the analysis.

c. The examination of items/exhibits, and materials recovered from items/exhibits.

d. Verbal and other communications, including reports.

e. Meetings attended and telephone conversations, including points of agreement or disagreement, and agreed actions.

f. Emails and other electronic transmissions (e.g. images) sent or received.

26.2.2 The records, in whatever form, shall be clear and comprehensive, and expressed in such a manner and in sufficient detail that another practitioner in

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38 Technical records include accumulations of data and information that result from carrying out tests – see section 44 – Glossary.

the same field, and in the absence of the original practitioner, can follow the nature of the work undertaken, any interpretations/opinions made, and the inferences drawn from the work. This is particularly important in situations where an insufficient quantity of the items/exhibit remains for independent re-examination or testing, or the form of the items/exhibit is altered.

26.2.3 Whenever practicable, technical records shall be produced contemporaneously with the examination. The practitioner shall begin making records from the time commission is received and shall continue making records throughout their involvement in the case. If there is any discussion about the case, or advice on tasking or submission was sought, prior or during contract review it may be appropriate to start making records before receiving formal instructions from the commissioning party.

26.2.4 When a request for an examination, an item is rejected at submission, a test result or report is rejected, the reasons for the original rejection shall be recorded, even if in the case of a report it is to be replaced.

26.2.5 For the period of record retention, traceability shall be maintained for all names, initials and/or identifiers. These should be legible and understandable.

26.2.6 It shall be possible to associate all changes to critical data with the person having made those changes. [39] [40] Reasons for the changes shall be recorded.

26.2.7 Hard copy records generated by the forensic unit used as part of the case file shall use a system which indicates completeness, for example through pagination using a page numbering system which indicates the total number of pages or an index sheet with this information. [41]

a. Each page of every document in the case record shall be traceable to the practitioner responsible for the sampling and/or performance of each

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39 A system, for example, with timed and dated electronic signatures could achieve this aim.

40 Changes to critical data shall be traceable, however it is accepted that some electronic systems may not always facilitate sufficient information to be included with the field in the same system. It is therefore acceptable for the records to be located in different systems or locations if this can be demonstrated to achieve the required traceability.

41 See ILAC-G19 [3] section 3.5, however assurance of adequate control of electronic records will also need to be demonstrated.

examination or test, to a uniquely identified case and uniquely identified item/exhibit. [42]

b. It shall be clear from the case record who has performed all stages of the analysis or examination and when each stage of the analysis or examination was performed.

c. Alterations or comments in the records shall be clear and be signed, or otherwise be attributable to the individual who made them and dated.

26.3 Checking and Primary Review

General

26.3.1 The forensic unit shall have a procedure for checking and primary review. [43] For methods that require calculations [44] and/or critical data transfers (see 32.1.2) that are not part of a validated electronic process, the procedure shall include a requirement for effective checks of those calculations and/or critical data transfers to be carried out.

26.3.2 The forensic unit shall have a procedure for carrying out checks on critical findings and designate competent individuals authorised to carry out such checks. [45] [46] Where checks on critical findings are carried out, the records shall indicate that each critical finding has been checked and whether it was agreed, or not and by whom and when the checks were performed. The procedure should include a process for resolving any discordant results or findings.

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42 Items should have an identifier which is unique within the organisation rather than simply within the case. Initials and number and/or date is not considered unique and although would not devalue or invalidate the item/exhibit if properly handled, it does add a risk which should be avoided.

43 Primary review is a review which occurs as part of the originally commissioned work by the forensic unit.

44 Including those embedded in spreadsheets.

45 The forensic unit may identify individuals external to the unit to conduct critical findings checks.

46 The forensic unit shall demonstrate the competence of persons conducting critical findings checks (e.g. inclusion in the forensic unit’s proficiency trials), this includes persons external to the unit if they perform this role.

26.3.3 Where the forensic unit has deemed [47] the procedure requires an independent check, the unit should define this level of independence [48] and records should be kept to demonstrate this.

26.3.4 The forensic unit shall, when such reviews are undertaken, have documented policies and procedures for the administrative review [49] of case records including reports. The administrative review shall establish that the records/reports comply with the forensic unit’s policies with regard to content and structure of such records.

26.3.5 The forensic unit shall have documented policies and procedures and authorised practitioners for the review of case records including reports. The review shall establish from the case notes and discussion with the practitioner that the work carried out is:

a. Appropriate to the requirements of the case;

b. Fully documented in the case notes, with appropriate checks on critical findings, calculations and data transfers;

c. In compliance with the forensic unit’s documented policies and procedures; and

d. Consistent with the contents of the report.

26.3.6 In all reviews, the case record shall indicate that the review has been carried out, by whom and when.

26.3.7 The checks and reviews shall be recorded as entries against each finding or on a summary of findings or on a report, as appropriate.

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47 For instance, this determination may be at the identification of end-user requirements in the validation study.

48 ILAC-G19 [3] section 4.7.5 requires this check to be conducted without knowledge of the original result where the critical findings check is the only quality control. For review of case records and reports the review should be by a practitioner who was not involved in the work being reviewed.

49 A review to establish that the records/reports comply with the forensic unit’s policies with regard to content and structure of such records.

26.3.8 If the checker/reviewer disagrees on any point and the matter cannot be resolved, the reason(s) for the disagreement and any action taken as a result shall be recorded.

Difference Resolution

26.3.9 The review or primary checking process may lead to a difference of opinion between the initial and reviewing practitioner. The forensic unit shall have a documented procedure for resolving or reaching a conclusion in such cases.

26.3.10 The procedure noted in section 26.3.9 shall ensure the obligations in relation to disclosure to the Criminal Justice System are discharged [21].

27. Internal Audits

27.1.1 The annual audit programme shall cover all aspects of the management system. This shall include, but not be limited to:

a. Implementation of the management system;

b. Records of individual files; and

c. Security and integrity of information and data (also 32.3 - Electronic Information Security).

27.1.2 A risk assessment-based approach should be taken to determine the frequency of the audit schedule, but methods shall be audited at least once every four-year cycle. [50]

27.1.3 Where the forensic unit undertakes to make statements of opinions and interpretations, the audits shall include a review of the process by which these are made and of the competence requirements of the individuals authorised to make such statements.

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[50] The frequency of audits should take account of the length of time (and stability of) the quality managements system has been in place, the size of the organisation, the complexity of the work being audited, the frequency of use of specific technical methods or procedures, and the potential consequences of noncompliance with the requirements. The value of occasional unannounced audits should also be considered.

27.1.4 Where examination and testing activities are delivered from a number of different operational sites, the internal audits shall cover all sites and all aspects of the management system.

27.1.5 When the results of the audit cast doubt on the effectiveness of examinations, or the correctness or validity of the forensic unit’s results to the extent that misleading information may have been reported, the forensic unit shall treat the audit result as a non-conforming result.

28. Personnel Requirements

28.1 General

28.1.1 The forensic unit shall ensure appropriate background checks (e.g. security checks) have been completed on all candidates for employment and contractors in accordance with relevant laws, regulations and ethics. These checks shall be proportional to the business requirements, the classification of the information to be accessed and the perceived risks. [51] The forensic unit shall ensure appropriate security clearance is maintained by all staff and contractors.

28.1.2 The commissioning party shall be notified of the level of background checks held in the forensic unit by staff with access to the data and items/exhibits to allow a determination of whether the level is acceptable (see section 23 - Review of Requests, Tenders and Contracts).

28.1.3 The contracts for all staff, permanent and temporary, shall contain confidentiality agreements, [52] setting out their own and the forensic unit’s responsibility for information security, and details of their expected conduct.

28.2 Standards of Conduct

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51 The required level of clearance for prolonged or unsupervised access to case material is normally Security Check (SC) [119] or Non-Police Personnel Vetting (NPPV) level 3 [120], or equivalent. The clearance level required may however be varied in writing by the commissioning party, the controller of the data or the Senior Accountable Individual of the commissioning party (where the party and the forensic unit are part of the same organisation).

52 The confidentiality agreements should cover the intellectual property of the forensic unit and all information relating to casework and shall not conflict with any disclosure requirements.

28.2.1 The forensic unit shall have a Code of Conduct compatible with the Standards of Conduct provided in section 16. Practitioners shall be made familiar with how the Code of Conduct relates to their role in the administration of justice and details of how this was achieved shall be recorded.

28.2.2 There is no specific requirement for familiarisation with the Standards of Conduct for personnel not directly conducting any aspect of an FSA, supporting the delivery of FSAs or with legitimate access to examination areas, items or records. However, such personnel should be made familiar with relevant issues to their role and access permissions such as security, continuity, contamination control, security and confidentiality requirements as set out in 28.1.3.

28.3 Competence

General

28.3.1 The forensic unit shall determine and document the requirements for competency and ongoing competency for each role, as set out in section 18 , including the competences required for reporting findings.

28.3.2 The forensic unit shall determine the appropriate competence framework for practitioners, [53] this should include the following.

a. Education.

b. Qualification.

c. Training.

d. Technical knowledge.

e. Skills and experience.

f. The nature of the competence assessment.

g. The frequency of reassessment of competence.

h. Whether observation of any testing or inspection work is required, and if so, the frequency of this.

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53 This may be a locally or nationally devised framework.

28.3.3 The forensic unit shall have processes to address the following.

a. Remedial actions when competence is found to have lapsed. See also 25.1 - Control of Non-Conforming FSA Related Work.

b. Remedial actions required should there be an event which undermines the credibility of a practitioner or the forensic unit. Such events may include, but not be limited to, the following.

i. Judicial criticism.

ii. Complaints.

iii. Criticism by a professional body.

iv. Criticism by the Regulator.

Competence Required for Reporting

28.3.4 Forensic units shall ensure that all practitioners who provide factual evidence based on scientific methodology are additionally able to demonstrate, if required:

a. Whether there is a body of specialised literature relating to the field;

b. That the principles, techniques and assumptions they have relied on are valid;

c. An understanding of where factual reporting in the FSA ends, and where evidence of opinion begins;

d. That assumptions they have relied upon are reasonable; and

e. The impact that the uncertainty of measurement associated with the application of a given method.

28.3.5 Forensic units shall ensure that all practitioners who provide evidence including opinion have a sufficient level of experience, knowledge, integrity and, where appropriate, qualifications, relevant to the type of evidence being adduced, to give credibility to the reliability of the work undertaken and the conclusions drawn. Practitioners shall also ensure that they are able to explain their methodology and reasoning, both in writing and orally, which should be concise in a way that is comprehensible to a lay person and not misleading.

28.3.6 In determining competence, the forensic unit shall consider whether any issues, other than those listed in section 28.3.5 , show that an otherwise apparently suitable person is not competent. Relevant issues include, but are not limited to, the following.

a. Adverse judicial comments.

b. Adverse findings by the Regulator.

c. Adverse findings by professional or regulatory bodies.

28.3.7 Forensic units shall ensure that all practitioners who provide evidence including opinion based on their practical experience and/or their professional knowledge are additionally able to provide: [54]

a. An explanation of their methodology and reasoning;

b. Reference to a body of up to date specialised literature relating to the field of expertise and the extent to which this supports or undermines their methodology and reasoning;

c. An assessment that any database they have relied on is relevant and sufficient in size and quality to justify the nature and breadth of inferences drawn from it, that the inferences are logically sound and that alternative hypotheses in the investigative mode and alternative propositions in the evaluative mode have been properly considered;

d. A demonstration that their methodology, assumptions and reasoning have been considered by other scientists and are regarded as sound, or, where challenged, the concerns have been satisfactorily addressed;

e. An assessment of the extent to which their methodology and reasoning are accepted by their peers, together with details of any outstanding concerns;

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[54] Also see the list included in the Criminal Practice Directions V (19A.5c) [28].

f. Relevant information to support claims of expertise, as well as anything that may adversely affect credibility or competence (e.g. adverse judicial findings); [26] [55] and

g. The statement of understanding and truth in expert reports for the CJS in England and Wales, as required in Criminal Practice Directions V 19B (see 38.1.9 and Criminal Practice Directions v 19B.1.13) [27].

28.3.8 Expertise cannot be simply measured in years, number of cases examined, educational achievements, post-nominals or seniority, nor is it equivalent to credibility. The broad range of case circumstances encountered in any discipline of forensic science means that a particular expert will have more relevant experience and expertise in some cases than in others.

a. The competence of each expert in each discipline in which they claim expertise shall be assessed, both initially and thereafter at appropriate intervals.

b. Continuing Professional Development (CPD) is an important element of ensuring ongoing competence, as is ensuring that experts remain up to date with their knowledge of the scientific literature relevant to their field. This enables them to comply with their obligations under Criminal Procedure Rules (CrimPR) 19.4 (b) and (f).

c. Experts should participate in regular evaluation of their expertise [28] [29] through, for example, proficiency tests that are representative of the complexity encountered in casework.

28.4 Competence Records

28.4.1 The forensic unit and/or individual practitioners, including those in external provider roles (and other providing external services) shall maintain, and keep readily available, records of education, training, skills and experience in

[55] Note the Criminal Procedure Rules 19.3-(3c) [36] requires experts to provide “notice of anything of which the party serving it is aware which might reasonably be thought capable of detracting substantially from the credibility of that expert.” This provision applies to experts regardless of the source of commission.

sufficient detail to provide evidence of proper training and formal competence assessment. [56] These records shall include, but not be limited to:

a. Academic and/or professional qualifications;

b. Internal/external courses attended;

c. Relevant training/retraining received whilst employed by the forensic unit;

d. Any subsequent remedial action from any substantive complaints, errors or adverse judicial comments;

e. Any substantive accolades, commendations, etc. pertinent to skills and experience;

f. The tasks for which the individual has been assessed as competent and authorised to carry out; and

g. The date(s) on which competence and authorisation were confirmed.

28.4.2 The manner in which competence is achieved, demonstrated, and maintained shall be documented, and the forensic unit shall have a policy for retention of training manuals, training and competence assessment records in line with the policy for retention of case files.

29. Environment where the FSA is Undertaken

29.1 Examination Facilities

29.1.1 The examination facilities shall include, as appropriate (to the work being undertaken):

a. Suitable accommodation and appliances (e.g. laboratory benches, safety cabinets, refrigerators, freezers) and space (per employee) to carry out the work to the required standard safely and without contamination;

b. Provision of appropriate environmental conditions (e.g. lighting, temperature, humidity, ventilation/air flow) required to facilitate correct performance of

[56] This may include records of continuous professional development.

examinations or tests, and not adversely affect the required quality of any measurement or invalidate results;

c. Proportionate protection against likely risks, such as arson, theft or interference with items/exhibits;

d. Archive/storage facilities with adequate storage conditions to prevent loss, deterioration and contamination, and to maintain the integrity and identity of documents/records/items/exhibits before, during and after examinations or tests have been performed; and

e. Facilities for the secure disposal of confidential waste and the safe disposal of hazardous materials.

Dedicated Facilities

29.1.2 The access and use of item/exhibit storage areas and server rooms should be controlled in addition to areas where work is carried out. The forensic unit shall hold on record a list of all staff who are authorised to enter these areas. This shall be reviewed and updated regularly.

29.1.3 Delivery and loading areas, and other points where unauthorised persons may enter the building, shall be isolated from casework and information processing areas and access shall also be controlled. Unauthorised persons needing to enter controlled areas shall be escorted at all times by authorised staff and a record of these entries shall be maintained.

Non-Dedicated Work Areas

29.1.4 Alternative work areas shall be assessed against the aims of 29.1.1.

29.2 Contamination Avoidance, Monitoring and Detection [30] [31] [32]

29.2.1 The forensic unit shall have policies and procedures relevant to the nature of the casework for the prevention, monitoring and detection of contamination that could interfere with the analyte of interest.

29.2.2 The steps in establishing procedures relevant to contamination control in recently introduced (or amended) methods [57] for trace evidence shall include, [58] but not be limited to:

a. Conducting a hazard or risk-based analysis of the entire method with respect to contamination (e.g. process mapping);

b. Identifying critical control points in the process where contamination events could occur (e.g. consumable selection, transfers, etc.) and for these critical control points:

i. Establish acceptable contamination control limits at each point;

ii. Establish monitoring requirements (e.g. frequency); and

iii. Establish preventative and corrective actions (e.g. when acceptable or control limits are found to be exceeded).

c. Establishing effective methods for both routine and deep cleaning/decontamination of equipment, facilities and surfaces;

d. Establishing requirements for record keeping; and

e. Establishing procedures for verifying that the contamination control process remains fit for purpose.

29.2.3 The processes and procedures for the management of contamination for trace evidence shall also include, but not limited to, consideration of the following.

a. Limiting and recording, and where necessary preventing, access by internal and external visitors to any areas where FSAs are undertaken where any recent activity by the visitor relevant to the FSA being undertaken could have an adverse effect on that FSA. Such activity could include, but not be limited to:

i. Incident scene attendance;

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57 This is taken to be methods introduced or put forward for accreditation from October 2016.

58 With new methods involving data or digital media, steps in establishing procedures relevant to data contamination control shall include 29.2.2 a, b, and e, although if items/exhibits are likely to also require trace evidence analysis this should be conducted first, or all these issues may still apply.

ii. Examination of complainant and/or suspect (e.g. for the purposes of taking samples);

iii. Prisoner handling; and

iv. Handling of, or exposure to, relevant materials (e.g. firearm and drugs).

b. Effective separation [59] of incompatible activities to prevent cross-contamination. This includes, but is not limited to, the handling of:

i. Un-amplified and amplified DNA;

ii. High and low-level drugs work;

iii. Toxicology work involving samples likely to have high and low levels of drugs;

iv. Examination of firearms and firearm discharge residues;

v. Examination of accelerant and fire scene debris; and

vi. Examination of items/exhibits from suspects, complainants and scenes. [60]

c. Policy on use of disposable equipment in specified areas and/or performing specific FSAs (e.g. gloves, face masks and mop caps).

d. Testing of consumables and chemicals in all stages of the examination/analytical processes and, where appropriate, testing for specific contaminants that could interfere with the success or interpretation of the examination or test (see also 29.2.2).

e. Good working practices, such as:

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[59] The extent of physical separation will dictate if objective evidence is needed to demonstrate effectiveness; for instance, a different facility versus simply an adjacent room with potentially shared access routes or service such as air conditioning will require different approaches. However, if temporal separation is the intention, then objective evidence to show the effectiveness of the approach is expected.

[60] The same practitioner should not examine the complainant and a suspect in relation to the same alleged incident.

i. Protecting items/exhibits in wrapping/containers when not being worked on or used;

ii. Using only new, or suitably cleaned equipment to remove solvent, standard or reagent from stock bottles;

iii. Not pouring unused portions of solvent, standard or reagent back into bulk supplies; and

iv. Frequent changing of solvent used for rinsing equipment.

f. Good housekeeping practices.

g. Analysis of blank controls.

h. Environmental sampling/monitoring with particular reference to acceptable levels of relevant potential contaminants. This should include equipment, work areas, consumables and clothing to ensure that any contamination of accommodation and/or equipment that does occur is recognised and controlled.

i. Using methods for both routine and deep cleaning/decontamination which include consideration of the following:

i. The nature of contaminants relevant to the operation of the FSA and/or the forensic unit;

ii. Work surfaces, walls, doors, flooring, ceiling, ducting, other fixtures and fittings and the likely vectors of contaminant transmission;

iii. The materials/chemicals appropriate for use in contamination control;

iv. Appropriate training and competence of staff deployed in cleaning/decontamination processes; and

v. Governance and oversight by senior management.

29.2.4 The policies and procedures shall ensure access to areas, other than scenes of incidents, where FSAs are undertaken is restricted to authorised individuals. These individuals shall be required to provide samples, and any necessary consent (e.g. for analysis and use of data), for elimination databases relevant to the nature of the work undertaken in areas they access (e.g. DNA analysis, friction ridge detail analysis) and any results found in casework screened

against them as detailed in the forensic unit’s policies and procedures. These databases may be locally or remotely maintained.

29.2.5 Policies and procedures for elimination databases of staff, internal/external visitors and equipment suppliers should include, but are not limited to:

a. Reporting policies;

b. Data formats;

c. Searching policies;

d. Validation of searching procedures;

e. Security and access;

f. Retention periods;

g. Sharing agreements (i.e. between forensic units);

h. Agreements/consents; and

i. Release forms.

30. Methods and Method Validation

30.1 General

30.1.1 The general requirement is that all technical methods and procedures used by a forensic unit shall be fit for purpose.

30.1.2 This involves establishing that the method operates in the expected manner, that the limitations of the method are properly understood, that the planned use of the method is appropriate and the approach to reporting is sensible.

30.1.3 Validation allows a proper understanding of the risks involved in the use of a method.

30.2 Selection of Methods

30.2.1 This section details the principles of the requirement for validated methods, the next section, 30.3 - Validation of Methods, details the required processes.

30.2.2 Forensic units with methods already [61] within the schedule of accreditation will normally only be required to collate the existing validation paperwork to form as comparable a validation library as possible, and produce the short statement of validation completion as described in 30.3.65 . [62]

30.2.3 Even where a method is considered standard and is in widespread use, scientific validity will still need to be demonstrated. The topic of verification of the validation of adopted methods is discussed below although many of the other validation steps are likely also to apply. If a method is being newly included in the forensic unit’s scope of accreditation and validation has not been conducted at the laboratory site where it is to be implemented, the forensic unit will have to follow the adopted methods procedure, which ends in the production of a validation library and statement of completion as well as demonstrating the method works in their hands.

30.2.4 If a method requires the use of portable equipment (i.e. equipment intended to be used at different locations) for any reason, the validation study shall include testing any additional controls as well as assessing any additional aspects that may impact on the tests. For ISO 17020 [2] applications see, for example, Process Requirements section 7.1.1 in UKAS-RG 201 [17] (including but not limited to temperature, humidity, surfaces, cross reactivity, lighting, cross contamination control, handling controls).

30.2.5 The forensic unit should have validated the method, product or service prior to use in casework in accordance with the requirements of this Code. If the implementation plan requires a period of pilot after the validation study for the validation to be considered complete, such as might be the case for novel [63] techniques, non-routine or infrequently used methods, or if there is any other

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61 This is taken to be methods introduced or put forward for accreditation prior to October 2016. However, at least one example of a validation compliant with the Codes will be required for assessment to include the Codes in the schedule of accreditation.

62 Subsequent releases of this Code may extend the requirement to existing methods. However, updates in technology, reviews of existing methods and the need for continuous improvement are expected to prompt validation studies.

63 Major breakthroughs, novel uses of existing science, or significant changes might warrant wider stakeholder consultations. In these cases, it would be useful to inform the Regulator, who may advise on the most expedient method of ensuring that the CJS requirements are understood.

deviation from the validation requirements set out in this Code, the forensic unit should ensure that the status of the validation for the product, method or service is clearly understood by the commissioning party prior to agreeing use in casework.

30.3 Validation of Methods

30.3.1 The forensic unit shall use methods of demonstrable validity (see the Standards of Conduct in section 16).

30.3.2 Validation should be conducted prior to implementation of the method. This may be performed in its entirety by the forensic unit, or the studies to produce the data may be performed by the manufacturer or another forensic unit; in which case the forensic unit implementing the method shall review the data to determine if it is adequate, reliable and relevant to the purpose it intends for the method (see Verification of the Validation of Adopted Methods 30.3.40 to 30.3.46).

30.3.3 If the validation has not been conducted at the site that will be using the method, the forensic unit shall verify the scope of the validation with the required steps in 30.3.7 ; this is except where the method has been validated for incident scene use and is being used at an incident scene (see, for example, UKAS-RG 201 [17]). This may be scaled up or down according to the adequacy and relevance of the available existing validation study. In such cases, following review of validation data to determine if the validation is adequate, the forensic unit’s practitioners trained and signed off as competent in the method shall demonstrate such adopted methods perform reliably at the given location by following the validation process. [64] [3] [33] [34]

[64] See ILAC-G19 [3] (3.10): “When a method has been validated in another organization the forensic unit shall review validation records to ensure that the validation performed was fit for purpose. It is then possible for the forensic unit to only undertake verification for the method to demonstrate that the unit is competent to perform the test/examination.” This Code expects the review to be against the end-user’s requirements with the production of the statement of validation completion see section 30.3.66.

30.3.4 The validation policy or procedure shall set out roles and responsibilities of practitioners involved in conducting validation, authorisation of key stages and reviewing outcomes.

30.3.5 To ensure validation studies are conducted on the final method, there should be a clear boundary between development and validation. It is important that any significant unexpected outcomes are not corrected during validation, but that the method is declared to have failed validation. Following such a failure either:

a. The method shall be abandoned; or

b. The method shall be amended (if that is possible while maintaining the required standards), and validation repeated. [65]

30.3.6 If a method is amended during validation, then the validation is invalid. The procedure should include consideration of how to prevent inadvertent re-entering of the development process once validation has started.

30.3.7 The validation procedure shall include where relevant, but is not limited to:

a. Determining the end-user’s requirements;

b. Determining the specification;

c. Risk assessment of the method;

d. A review of the end-user’s requirements and specification;

e. Setting the acceptance criteria;

f. The validation plan;

g. The outcomes of the validation exercise;

h. Assessment of acceptance criteria compliance;

i. Validation report;

j. Statement of validation completion; and

[65] Should validation need to be repeated, consideration of whether using the same dataset or item introduces a potential risk of optimising the method to the validation sample set itself, so separation of stages in name only.

k. Implementation plan.

30.3.8 In certain circumstances implemented methods will require revalidation, e.g. when:

a. Quality control indicates that an established method is changing with time;

b. Equipment that was not validated to be mobile or portable is moved to a new location;

c. Deficiencies have become apparent after the method has been implemented; or

d. The end-user identifies a change in requirement.

Determining the End-User’s Requirements

30.3.9 The process of innovation ending in the implementation of a validated method is more likely to be instigated by the forensic unit than the end-user. However, the requirements of all end users (e.g. other practitioners, investigators, prosecutors and the CJS) must be considered. To meet the needs of the CJS the expectations of the court (e.g. Criminal Practice Directions [27] V 19A.5, relevant case law [21]) need to be determined.

30.3.10 The amount of direct input from the CJS end-user should be determined by the forensic unit, based on the type of innovation; certain requirements may be generic and form a set of core requirements to the casework type.

30.3.11 The Criminal Practice Directions V (i.e. 19A.5) [27] that supplement Part 19 of the Criminal Procedure Rules [35] should be considered as providing an insight as to the expectations of the CJS end-user. These expectations apply regardless of whether the result is evidence of fact or opinion.

30.3.12 The end-user’s requirement shall take account of, as appropriate:

a. Who will operate or use the new method, product or service post-delivery, and in what environment;

b. What the new method or product is intended to deliver to the end-user’s;

c. What statutory and regulatory requirements related to development and use of the method or product apply;

d. Whether there are any compatibility issues to be considered, e.g. data output formats;

e. What level of quality performance is expected; and

f. By what date the new method, product or service is required for implementation.

30.3.13 End-user’s requirements should conform to the following rules:

a. Each requirement is a single statement;

b. Each requirement is testable;

c. Each requirement specifies something that the solution will do, not how it will do it;

d. Each requirement specifies in its wording whether it is mandatory or desirable; and

e. Each requirement is written in a language that can be understood by the non-technical stakeholders.

30.3.14 Where the method is part of a service to be provided to a specified commissioning party, the forensic unit shall also ensure their formal agreement of the method selection.

Determining the Specification

30.3.15 A detailed specification shall be written for the method and shall include the technical quality standards. It may be an extension of the end-user’s requirements document or a separate document.

30.3.16 The specification adds detail to the requirements captured in end-user requirement from the range of users. It also draws in other technical requirements and is ultimately what is to be tested, encapsulating what this method is to do, the configuration, and what the method can and cannot be used for.

30.3.17 At this stage the list contained in the ILAC-G19 [3] (3.10) should be considered, even if the points listed were not explicitly raised in the end-user requirement capture exercise. The specification may also draw on technical details from a review of the scientific literature.

Risk Assessment of the Method

30.3.18 Once the method has been designed or determined, there shall be an assessment to identify any risks, or potential risks, to the CJS related to the use of the method or amendment to the method, including ad hoc methods. The process shall include, but not be limited to:

a. Identifying, on the basis of the use to which the results may be put, the possible impact on the CJS of any errors in the results, associated materials or procedures; and

b. Identifying areas where the operation of the method, or interpretation of the results, requires specialist skills or knowledge to prevent ambiguous or misleading outputs or outcomes.

30.3.19 The forensic unit should define the risk assessment method it will use. This Code requires risk assessment in various sections including in contamination (see section 29.2.2) and control of data (see section 32.1.2). The methodology recommended in both is based upon process mapping and identifying the critical control points for the risks or failure modes [66] at those stages. One process map may be used to cover the whole method against different risks, and may be used to evaluate, or at least identify, potential contributions to uncertainty.

30.3.20 Where the method relies on a scientific model or theory the risk assessment should address the following in a forensic science context:

a. The validity of the theory/model;

b. Any assumptions incorporated within the theory/model; and

c. Limits on the application of the theory/model.

30.3.21 In light of the assessment there shall be recommendations for modification of the specification, specific studies to be included in the validation exercise or

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66 Examples of how Failure Mode Effect Analysis may assist are included in guidance published by the Regulator. [34]

additional procedures and/or safeguards that should be implemented. Examples would include, but not be limited to:

a. Caveats about the use of the method;

b. Circumstances in which the use of the method would be inadvisable; and

c. Additional work that should be undertaken in combination with the method.

30.3.22 Where items/exhibits provided by an end-user, or data derived from these, are required for the development work or validation, the forensic unit shall obtain prior permission, from those with responsibility for the items and/or data (e.g. the commissioning party or prosecuting authority) for their use and include their use in the risk assessment. [36] Given the risks involved in the use of casework items/exhibits and/or data the Senior Accountable Individual for the forensic unit shall be informed of the proposed use.

30.3.23 The risk assessment shall be subject to version control and should feed into the statement of validation completion.

Review of the End-User’s Requirements

30.3.24 The forensic unit shall review the requirements collated to ensure that requirements considered essential/mandatory have been translated correctly into the specification and the specification is fit for purpose. Where appropriate, the end-user’s specifying the requirement may be involved in this review process.

30.3.25 When a review identifies that there are risks, or that there are compatibility, legality or ethical issues, the forensic unit shall produce a revised end-user’s requirements and/or specification.

30.3.26 Any subsequent changes to the specification shall then be only made in line with the forensic unit’s change control procedures and only following further review and acceptance of the impact of the changes by the intended end-users.

30.3.27 The forensic unit shall ensure that all practitioners involved in the development and validation/verification of the method are informed of any agreed changes to the end-user’s requirements or specification.

The Acceptance Criteria

30.3.28 The acceptance criteria shall be established in advance of the validation and should be clearly stated, based upon the specification, the risk analysis, and any control strategies put in place to control identified risks.

30.3.29 The acceptance criteria shall be used to demonstrate the effectiveness of the method and control strategy within measurable and set tolerances.

The Validation Plan

30.3.30 The validation shall be carried out according to a documented validation plan. The validation plan shall identify and define the functional and performance requirements, the relevant parameters and characteristics to be studied and the acceptance criteria for the results obtained to confirm that the specified requirements for the method, product or service have been met.

30.3.31 Where appropriate, the validation plan shall also include a requirement to check the relevant parameters and characteristics of the procedures for sampling, handling and transportation. The same level of confidence in the results obtained shall be required whether the method is to be used routinely or infrequently.

30.3.32 The validation shall be carried out using simulated casework material in the first instance and subsequently, where possible, permitted and appropriate, with actual casework material to confirm its robustness. [67]

30.3.33 The validation plan should be tailored depending on whether it is intended for the:

a. Validation of measurement-based methods;

b. Validation of interpretive methods;

c. Verification of the validation of adopted methods; and/or

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67 Legal advice may be required for the use of casework material where the exemption in relevant legislation ‘for law enforcement purposes’ may not apply. Validation studies on casework material generates disclosure requirements and a protocol with guidance on the issue of handling differences between results obtained with existing and the new methods. [37]

d. Verification of the impact of minor changes to methods.

30.3.34 The validation plan should be signed off by a suitably competent individual who was independent from the development of the method and has sufficient knowledge of the relevant field under study.

30.3.35 Where this is a plan for the validation of a new method rather than an adopted method (see 30.3.9), it is accepted additional individuals may be needed to provide the necessary breadth of technical knowledge to evaluate the plan. [68] In such cases these individuals shall be listed in the validation report and their role in supporting the person responsible for sign-off should be recorded.

Validation of Measurement-Based Methods

30.3.36 The validation plan should ensure the required parameters and characteristics are studied:

a. By a practitioner competent in the field of work under study, who has sufficient knowledge of the work to be able to make appropriate decisions from the observations made as the study progresses; and

b. Using equipment that is within specification, working correctly and, where appropriate, calibrated.

30.3.37 The functional and performance requirements, and the relevant parameters and characteristics for measurement-based methods [69] that shall be considered include the following.

a. Competence requirements of the practitioner.

b. Environmental constraints.

c. Item/exhibit and/or sample size.

d. Item/exhibit and/or sample handling.

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68 Good experimental design ensures the study tests the features required and can reduce the overall experimental effort.

69 The applicability of the parameter should be considered against the aim and the nature of the test. Determining a limit of quantification 30.3.37j may be evaluated as not applicable in an entirely qualitative test, but there may still be a requirement to estimate the uncertainty (see 31 - Estimation of Uncertainty).

e. Item/exhibit and/or sample homogeneity.

f. Ability of the sampling process to provide a representative sample of the item/exhibit.

g. Efficiency of recovery of the substance(s) to be identified/measured (i.e. analyte) during sample preparation for analysis.

h. Presence or absence of the analyte(s) of interest in the sample analysed.

i. Minimum quantity of each analyte that can be reliably detected.

j. Minimum amount of each analyte that can be accurately quantified.

k. Identification/measurement relates to the analyte(s) alone, and is not compromised by the presence of some matrix or substrate effect or interfering substance.

l. Results are consistent, reliable, accurate, robust and with an uncertainty measurement.

m. Compatibility with results obtained by other practitioners using different equipment and different methods.

n. Limitations of applicability.

Validation of Interpretive Methods [70]

30.3.38 The functional and performance requirements for interpretive methods are less prescriptive than for measurement-based methods although should include testing against representative ground truth data. [71] They concentrate on the competence requirements for the practitioners involved and how the practitioners shall demonstrate that they can provide consistent, reproducible, valid and reliable results that are compatible with the results of other competent practitioners. This may be achieved by a combination of:

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70 Examples of interpretive methods may include the comparison of marks, handwriting, microscopic comparisons etc.

71 Examples of data where the truth is known (not inferred) include datasets created from known donors of samples or call data records created by staged calls at specific coordinates.

a. Independent confirmation of results/opinions by another competent practitioner (i.e. without prior knowledge of the first result/opinion provided);

b. Participating in inter-laboratory comparisons (collaborative exercises or proficiency tests); and

c. Designing frequent in-house assessment into the process using positive and negative competence tests.

30.3.39 An interpretive method shall require only the relevant subset of the parameters and characteristics for measurement-based methods to be determined.

Verification of the Validation of Adopted Methods

30.3.40 Verification is defined as confirmation, through the assessment of existing objective evidence or through experiment, that a method, process or device is fit (or remains fit) for the specific purpose intended.

30.3.41 Each of the steps of the validation process are to be completed (i.e. as detailed in 30.3.7), whether the user is producing the objective evidence for relevance, reliability and completeness themselves or objectively reviewing data produced by others. [72] The required end-user requirement and specification form the purpose that the forensic unit is assessing against. If a specification is being also adopted from elsewhere, this should be assessed for suitability for the forensic unit’s requirements also.

30.3.42 The assessment to identify any risks, or potential risks, to the CJS related to the use of the method or amendment to the method should be included. If the method is to be deployed in a different manner than the study that provided the data the forensic unit intended to review the specification against, the differences require to be risk-assessed and may prompt a fuller validation study.

30.3.43 Where the validation has not been conducted at the site [73] that will be using the method, the forensic unit must verify the scope of the validation with the study

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72 External developers of methods or tools are encouraged to conduct their developmental validation exercises in a comparable manner to the requirements set out in this Code, as well as making the data available..

73 See UKAS RG 201 for methods intended for incident scene use. [18]

scaled up or down according to the adequacy and relevance of the available existing validation study.

30.3.44 The amount of work required to be carried out in verification exercises when introducing methods developed and validated elsewhere, shall take account of the adequacy of the available existing validation data and the familiarity and experience within the forensic unit of the techniques, equipment and facilities involved.

30.3.45 The forensic unit shall check its performance against the specification for the method it is required to produce rather than simply against existing published data, as the requirements may differ.

30.3.46 The validation report shall have as a minimum a summary of the experimental work/review, results, specification used in the review, the risk assessment, practitioner training/competence requirement and assessment plans. The required validation library and statement of validation completion shall be produced.

Minor Changes in Methods

30.3.47 Replacing like-for-like equipment [74] or minor changes to methods used by the forensic unit may not always require a full revalidation exercise. The impact of the change shall be risk assessed, verified against the original validation and authorised in line with other validation studies.

30.3.48 A revalidation exercise shall be carried out when changes are assessed to have the potential to influence the results obtained.

Infrequently Used Methods

30.3.49 Infrequently used methods pose a challenge in maintaining competence and capability for any FSA. While the use of such methods is acceptable there need to be appropriate safeguards.

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[74] Replacing the same make and model may still need some assessment as minor modifications, including software and firmware, might affect the operation.

30.3.50 Methods used less than once in every three-month period may be considered to be infrequently used. However, the forensic unit may decide not to treat a method which falls within the definition as an infrequently used method.

30.3.51 All methods the forensic unit intends using, including infrequently used methods, shall have been validated in line with this Code and the forensic unit shall demonstrate competence to perform the method. The validation, verification or re-verification shall include the steps in 30.3.7 and, as with all methods, a validation library is required. [75]

30.3.52 Forensic units shall have a procedure to identify infrequently performed methods and their maintenance or use including the following:

a. The definition of infrequently performed method;

b. Responsibility for confirming the validation or verification remains appropriate;

c. How competence will be maintained or is demonstrated, ILAC G19 [3] recommends:

i. Regular use of control samples even when casework samples are not being analysed; or

ii. Re-verification before the examination/test in question is performed on a casework sample involving at least the use of an appropriate reference material, followed by replicate examination/testing of the real sample;

d. The sign-off procedure for use in casework including justification of method choice; and

e. How the status of the method will be described in reports.

30.3.53 The manner in which infrequently used methods are dealt with in relation to accreditation is considered in section 41.2.

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75 As with all validations the study should be scaled according to user requirement and case circumstances the adequacy and relevance of the available existing validation study, however the forensic unit must still verify the scope of the validation with the required steps in 30.3.7, even if these are brief.

30.3.54 Infrequently used methods may be maintained on the forensic unit’s schedule of accreditation through regular use of mock casework, competence assessments and any other measures agreed with the accreditation body. [37] In order to be retained within the schedule of accreditation, UKAS requires each aspect of the FSA included in the schedule of accreditation to be assessed at least once within the four-year accreditation cycle and details the requirements in its publication TPS 68 [37]. [76]

30.3.55 If not included on the schedule of accreditation, then the methods shall be re-verified in accordance with the requirements of this Code prior to each use in casework (see 30.3.52 as well as ILAC G19 [3]). If these activities are to become part of the routine activities of the forensic unit (i.e. used more frequently than once every three months), and the FSA requires it, accreditation shall be sought and obtained by the date set in the FSA definition.

Validation Outcomes

30.3.56 A summary of the outcome of the validation exercise shall be included in the validation report, which shall normally be retained for 30 years after the last use of the method. A full record of the validation exercise will normally be retained by the forensic unit for a similar period, but as a minimum shall be maintained for the functional life of the method and shall include:

a. The authorised validation plan and any subsequent changes to the plan, with justifications and authorisations for the changes;

b. All experimental results from the validation exercise;

c. A detailed comparison of the experimental results with the specified requirements;

d. Independent evaluation of the extent to which the results obtained conform or otherwise to the specified requirements;

e. Any corrective actions identified; and

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[76] Other accreditation bodies may have similar requirements.

f. Independent approval of the validation. [77]

Assessment of Acceptance Criteria Compliance

30.3.57 The independent evaluation of compliance of the experimental results with specified requirements shall be carried out by a person (or persons) not involved in the development of the method or conducting the validation process.

30.3.58 The person(s) shall have demonstrated they have sufficient knowledge of the issues involved to be able to identify and assess the significance of any deficiencies. [78]

30.3.59 The independent authorisation shall typically establish whether:

a. The validation work is adequate and has fully demonstrated compliance of the method with the acceptance criteria for the agreed specification; and

b. The method is fit for its intended use.

30.3.60 If the forensic unit were to plan to implement methods rated as high risk and/or likely to attract challenge once implemented, the Regulator should be consulted as to the need for any wider review and/or publication prior to implementation.

Validation Report [79]

30.3.61 The forensic unit shall produce a validation report in sufficient detail to allow independent assessment of the adequacy of the work carried out in demonstrating that the method, product or service conforms to the specification and is fit for purpose. The report need not contain all the experimental data, but a summary of this data shall be provided, and the raw data shall be available for inspection if required.

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77 The same person may carry out both the independent evaluation and the independent authorisation, if competent to do so.

78 The person(s) may be employed by the forensic unit, contracted by the forensic unit to carry out the evaluation, or be wholly independent of the forensic unit. If employed by the forensic unit, the evaluator/authoriser would need to be able to demonstrate the appropriate level of independence.

79 Forensic units with methods within the schedule of accreditation, on or before 1 November 2016, will often only be required to compile the validation library for those specific methods, which contains a validation report in its original format and the comparable information that the end-user requirement and/or specification would contain (i.e. what the method was intended to be able to do). It is good practice to review the completeness of the validation at this stage and take any further steps to ensure that the method can be said to be valid on the basis of the records held.

30.3.62 The content of the validation report shall depend on the type and extent of validation carried out, but as a general guide it should include, as appropriate:

a. A title and unique identifier;

b. A description of the purpose of the method, product or service;

c. The specification;

d. The name, version number and manufacturer of any equipment used;

e. The name(s) and signature(s) of the person(s) accountable for the development of the validation processes;

f. The validation plan;

g. The risk assessment;

h. Any authorised changes to the validation plan and justifications for the changes;

i. A summary of the experimental work and outcomes in sufficient detail to ensure that the tests could be independently replicated by a competent person;

j. Details of any review reports produced;

k. Conformity with the acceptance criteria (expected compared with actual results and any pass/fail criteria);

l. Any limitations/constraints applicable;

m. Any related published papers and similar methods in use by the forensic unit;

n. Any recommendations relating to the implementation of the method, product or service; and

o. The date of the report.

30.3.63 The forensic unit shall submit the validation report for review by persons suitably qualified and independent of the validation process; any issues arising should be dealt with expeditiously.

30.3.64 All the required records relating to the development and validation of the method, product or service shall be archived, together with the means of

accessing the records, and will normally be kept for 30 years following the method’s last use in casework. [80]

Statement of Validation Completion

30.3.65 The forensic unit shall prepare a ‘statement of validation completion’ on the successful completion of a validation exercise. The aim of the statement of validation completion is to provide those making decisions on the use of the results with a short executive summary of the validation steps performed, and key issues surrounding the validation. The intention is that the statement will be no more than two sides of A4 paper in plain language. [81]

30.3.66 The approval by the forensic unit on the scope of the validation must be clear.

30.3.67 The forensic unit should provide any further information that would be useful to the CJS. Examples would include, but not be limited to:

a. Caveats about the use of the method;

b. The approved uses of the method, which could be by case type or item/exhibit type;

c. Circumstances in which the use of the method would be inadvisable; and

d. Additional work that should be undertaken in combination with the result.

Validation Library

30.3.68 The forensic unit shall have available a library of documents relevant to the authorisation of the new method through validation or verification. Where the following are not already distinct sections in the validation report, the content of this library shall include, but not be limited to:

a. The specification for the method approved (see earlier sub-section Determining the specification);

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80 The blanket retention period is an alternative to tracking a method’s use in casework and applying the correct retention period in accordance with the Criminal Procedure and Investigations Act 1996 [102], as amended.

81 See also the CPS Core Foundation Principles for Forensic Science Providers [90] and the list of factors in direction 19A.5 contained in the Criminal Practice Directions. [87]

b. Any associated supporting material, such as academic papers or technical reports that were used to support or provide evidence on the applicability of the method; [82]

c. The risk assessment for the method approved;

d. The validation plan for the method approved;

e. The validation report;

f. The record of approval; and

g. The statement of validation completion.

30.3.69 Where the method implements a scientific theory/model or an interpretation or evaluation model, the library should include a record of information supporting the use of the theory/model.

30.3.70 Where the method relies on reference collections or databases, the nature, access and their availability should be described.

30.3.71 The information in the library may be disclosable in criminal proceedings [83] and should be prepared with that possibility in mind.

Implementation Plan and Any Constraints

30.3.72 The forensic unit shall have a plan for implementation of methods, products or services new to the forensic unit. This plan shall address, where relevant:

a. If the revised or new method has the potential to offer new analytical opportunities relevant to revisiting old cases, how will this new capability be communicated to previous commissioning party’s to ensure benefits and risks are clearly available for them to evaluate if any action is warranted;

b. The standard operating procedure (including the process for assessment/interpretation/reporting of results) or instructions for use;

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82 The literature review also ensures the body of knowledge requirement as outlined in R v. Bonython [1984] 38 SASR 45 can be demonstrated as well as supporting the application of direction 19A.5d of the Criminal Practice Directions V [28].

83 Commercial-in-confidence does not override disclosure requirements including those of the Criminal Procedure and Investigations Act 1996 [102] and a refusal to disclose may prevent methods, products or services being used.

c. Requirements for staff training, competence assessment and on-going monitoring of staff competence;

d. Integration of the method with what is already in place;

e. If the method is intended to be included in the scope of accreditation and what steps are required to achieve this;

f. The monitoring mechanisms to be used to demonstrate that the method remains under satisfactory control during its use;

g. The protocols for calibration, monitoring and maintenance of any equipment;

h. The supply and traceability of any standards/reference materials;

i. The supply and quality control of key materials, consumables and reagents;

j. The item/exhibit handling and any anti-contamination protocols;

k. The accommodation plan;

l. Any specific health and safety, environmental protection, data protection and information security arrangements;

m. The communication plan; and

n. The schedule for post-implementation review.

31. Estimation of Uncertainty

31.1.1 A forensic unit performing testing [84] is required to evaluate measurement uncertainty; testing is the determination of one or more characteristics according to a procedure and although typically quantitative, it can be qualitative (e.g. a presumptive test with a colour change).

31.1.2 Qualitative testing may be for the presence or absence of a defined analyte but there will be uncertainty associated with the underlying test conditions. Where the test method precludes rigorous evaluation of measurement such as a test

[84] The forensic unit may undertake testing as part of incident scene investigation. ILAC-G19 [3] includes, but does not limit such testing to, quantitative measurements and presumptive or screening tests. Inspection activity that contains testing is expected to meet the relevant requirements of ISO 17025 [1], this includes but is not limited to estimation of uncertainty of measurement (see also ILAC-G27 [91]).

that is qualitative in nature, UKAS M3003 [38] states “there will be uncertainties associated with the underlying test conditions and these should be subject to the same type of evaluation as is required for quantitative test results”. ILAC G17 [39] indicates that with qualitative testing or examinations, an estimation of the probability for false positive or false negative test results may be relevant. A method of evaluating contributions to uncertainty may include the method used for risk assessment during the validation of the method (see 30.3.19).

31.1.3 The impact that uncertainty may have on the findings shall be included in both factual and evaluative reports to the CJS where it is relevant.

31.1.4 When a procedure is modified, in addition to any validation or verification, forensic units should also review the measurement uncertainty.

31.1.5 Guidance on the estimation of uncertainty of measurement is contained in Appendix N of the UKAS M3003 publication ‘The Expression of Uncertainty and Confidence in Measurement’. [38] [85]

31.1.6 The Criminal Practice Directions V (19A.5c) [27] which supplements Part 19 of the Criminal Procedure Rules [35] include several factors which should be considered. However, the following direction that the court may take into account in determining admissibility is particularly relevant:

“19A.5c “if the expert’s opinion relies on the results of the use of any method (for instance, a test, measurement or survey), whether the opinion takes proper account of matters, such as the degree of precision or margin of uncertainty, affecting the accuracy or reliability of those results.”

32. Control of Data

32.1 General

32.1.1 The forensic unit shall have procedures within its management system to ensure that all necessary information is recorded accurately, maintained so that its authenticity and integrity is not compromised, and is retained and destroyed in accordance with the forensic unit’s retention and destruction policy (see 39 -

[85] Guidance has also been issued by Eurachem. [121]

Retention, Recording, Revelation and Disclosure). [22] [40] [41] [42] This applies within all environments the FSA is performed or output stored, including remote sites such as authorised home-based working environments where FSAs are conducted.

32.1.2 The forensic unit shall perform a risk assessment that should include process mapping and identify critical control stages in the process require specific protection steps to prevent loss, corruption and unauthorised access. This risk assessment may occur during method development, method validation and combined with risk assessments looking at of risk of contamination [86],or may be standalone looking at data. The steps included in the risk assessment shall include the following.

a. Identify critical data.

b. Identify critical control points (i.e. places where data is entered, transferred, stored or processed).

c. Identify hazards to be controlled at the critical control points (e.g. data corruption, errors, media loss, unauthorised access, unauthorised manipulation or data extraneous to the stage of the activity to introduce the potential for cognitive bias). [87]

d. Consider all test items/exhibits related to the FSA carrying data, or if wider risk assessment is being performed, all items/exhibits.),.

e. Include technology operated by the forensic unit such as mobile phones, satellite navigation systems, laptops, cameras etc. [88]

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86 This critical control point approach is a risk analysis advocated in this Code for assessing risk of contamination as well as in guidance [24] issued by the Regulator for assessing the risk of cognitive bias. As the process mapping includes information flow, storage and transfer, it is recommended the process mapping is used for assessment of these and other risks in the process at the same time (see also 30.3.19).

87 Should it be required, and relevant, more detailed guidance of the types of risk can be obtained from BS ISO/IEC 27001:2013 Information technology – Security techniques – Information security management [45] systems – Requirements and BS ISO/IEC 27002:2013, Information technology – Security techniques – Code of practice for information security management. [46]

88 Critical control points include the data transfer off items/exhibits, but here also technology operated by the forensic unit which may contain data.

32.1.3 The forensic unit shall identify mitigation steps based on the risk assessment to:

a. Minimise the risk of data loss;

b. Minimise the risk of data corruption (deliberate, degraded, actual or suspected);

c. Control extraneous information;

d. Demonstrate that the results are reliable and analytically sound; and

e. Maintain continuity and prevent unauthorised access to and/or amendment of all electronic records identified by assessment of the critical control points of key data.

32.1.4 In case of nationally provided and managed services that are outside the control of the forensic unit, the forensic unit shall consider, and document, the risk to the forensic unit and any mitigation introduced to control that risk.

32.1.5 Protection steps shall be tested by sampling of key data. [89]

32.1.6 Whilst these clauses indicate the forensic units, where the forensic unit is within a larger organisation, achieving or demonstrating compliance may require some liaison with the organisation’s Information Security/IT departments. The Senior Accountable Individual (SAI) is responsible for ensuring compliance with this Code and should be senior enough to ensure support services in larger organisations outside the forensic unit assist compliance and/or demonstration of compliance if required (see 18.2).

32.1.7 The following sections focus on information held in an electronic form, more general requirements that also apply for physical items/exhibits are set out in this Code in sections 22 – Document Control, 26 – Control of Records, 29 – Environment where the FSA is Undertaken, and in section 36 – Handling of Items/Exhibits.

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89 Assessment of what is key data should be risk based, and process mapping to look at data flow through each process and identify critical control points would be an appropriate assessment of what stages in the process require specific protection steps to prevent loss, corruption and unauthorised access.

32.2 Electronic Information Capture, Storage, Transfer, Retrieval and Disposal [90]

32.2.1 The forensic unit shall establish procedures for the capture and retrieval of electronic information appropriate for the process or method. If the capture or transformation process does involve any loss or change, this should have been assessed during validation and the acceptance criteria stated (e.g. as defined in the method’s end-user requirements, specification or in the procedure itself).

32.2.2 Where scanning technology is used, the forensic unit shall establish procedures and quality control for the scanning of documents in paper form, microforms and other forms of information, as appropriate, to ensure that any potential information loss as a result of the scanning is within acceptable limits. [91]

32.2.3 Appropriate to the associated FSA, the procedure and policies should ensure that where key information is extracted from pictorial image files the original images are retained and linked with the captured data, including auxiliary data or digital metadata.

32.2.4 Where an electronic document has, for example embedded files or hyperlinks, all relevant parts of the document shall be stored in line with the forensic unit’s retention policy along with their content.

32.2.5 Critical data should be accessible throughout its period of retention.

32.2.6 When data is migrated from storage media owned or controlled by the forensic unit to alternative storage media, the forensic unit shall establish procedures to ensure that all digital objects [92] have been successfully migrated. The digital object and file format of the migrated digital objects should not have changed, or that the changes are known, have been audited, and meet requirements.

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90 Further information and guidance can be found in BS 10008:2014, Evidential weight and legal admissibility of electronic information – Specification. [125]

91 Further information and guidance can be found in ISO 12653-1:2000, Electronic imaging - Test target for the black-and-white scanning of office documents - Part 1: Characteristics. [123]

92 A digital object is a discrete digital structure that contains meaningful data – see glossary.

32.2.7 If replacement software (e.g. an operating system or application software) is implemented, the forensic unit shall ensure that procedures are established to retain access to any critical data reliant on that software.

32.2.8 Any compression applied to the archival storage of data/information should be fit for purpose; for evidential data this may mean it should be assessed if compression should be mathematically lossless so as not to put into question its authenticity.

32.2.9 Data shall be retained according to retention and destruction policy until such time as that policy determines it should be destroyed (see also 40 - Retention, Recording, Revelation and Disclosure). Destruction or disposal of the data, including the method by which that is achieved should be recorded within the audit trail for that data.

32.3 Electronic Information Security [43]

32.3.1 The forensic unit shall have an information security policy which explains how the unit meets its responsibilities outlined in section 32.1 . [44] [45] [46] The information security policy shall describe the procedures, based on business and security requirements, as assessed by the forensic unit, for the management of its electronic information. The forensic unit shall ensure procedures are subject to regular testing, audit and review. [93]

32.3.2 The forensic unit’s information security policy shall have processes for the following parts of this section.

Access Control to Electronic Information

32.3.3 The access control procedures shall include the identification, authentication, and authorisation of users. Users shall have defined privileges which limit, as far as practical, access to only the information and key operational services they require to perform their roles.

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[93] The testing may be conducted by the forensic unit’s IT provider, however the responsibility to ensure it occurs and provide evidence of the testing resides with the forensic unit.

32.3.4 When users leave their role or the organisation, the forensic unit shall ensure access is removed.

32.3.5 Reviews should take place at least every 6 months to determine whether access rights are still needed - if access rights are no longer needed, they shall be removed.

32.3.6 Users with administrative rights shall use second factor authentication [94] where this is technically possible.

32.3.7 Accounts with administrative rights shall only be used to perform defined administrative duties [95], and not be used for routine access to e-mail or the Internet. The administrative duty may include periodic access to emails/or internet to download software patches or perform a software update, however the risks of this open access should be controlled.

32.3.8 Where access is under the control of the forensic unit or the wider organisation the forensic unit may be part of (e.g. not a nationally delivered system), authentication failures should be throttled to 10 attempts in 5 minutes and locked out where this is practicable. Access control mechanisms shall be protected to prevent unauthorised system-wide access. [47] [48]

The Selection, Use and Management of Passwords

32.3.9 The forensic unit shall have procedures for the selection, use and management of passwords which should be formulated to help users to generate better passwords. The procedures shall include the following.

a. Passwords should be of an appropriate level of complexity. Consideration may be given to using:

i. The 'three random words’ [49] technique for generating suitably complex and memorable passphrases; or

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94 Second factor authentication or two-factor authentication (often shortened to 2FA) is something that the user (and only the user) can access, such as a code that is sent by text message, or that is created by an application or dongle. [92]

95 With the exception of evidence handling software applications which require administrative rights for normal operation.

ii. Machine generated passwords with appropriate facilities to store them such as password managers. [50]

b. Passwords shall be a minimum of 8 characters and should have no maximum length. Regular password expiry should not be enforced, but users shall change their password when it is known (or suspected) that it has been compromised.

c. Users should be directed to use different passwords for their:

i. Personal and any work accounts; and

ii. General work account and any work accounts they may have with administrative rights.

d. Users should, where technically possible, be prevented from reusing passwords.

e. Users should, where technically possible, be directed to not select easily guessed or commonly used passwords [51] and should be prevented from doing so.

f. The system should be designed to protect the password in transit and at rest using appropriate encryption and hashing techniques. [48] [52] [53]

g. All default administrative passwords for applications, network equipment and computers shall be changed [48] to meet the requirements identified in this section.

Protection Against Malware

32.3.10 The provisions of this section (comprised of 32.3.11 - 32.3.20) do not apply to evidence handling activities where the use of anti-malware processes have the potential to adversely affect the work. In activities where anti-malware processes are not employed the forensic unit should implement suitable safeguards against the effect of malware.

32.3.11 Subject to the provisions of section 32.3.10, the forensic unit shall have procedures for the detection, removal and/or treatment of malware. These procedures may be based on system design and one, or more, software

packages. The procedures should ensure the detection, quarantine, removal and/or impact mitigation of malware. [96]

32.3.12 Software which is part of the anti-malware system shall be updated when new definitions become available. Anti-malware updates should be included in the forensic unit's change procedures to manage any potential impact to the forensic science activity.

32.3.13 Anti-malware system shall cover all compatible computers and hardware, unless specified operational requirements dictate otherwise. The forensic unit should implement additional anti-malware procedures such as application/executable allow listing. [54]

32.3.14 The forensic unit shall have, or ensure that its IT provider has, procedures in place to protect from website and email-borne caused by drive-by download and phishing attacks malware for all devices that access the Internet.

32.3.15 The forensic unit shall access the Internet via a proxy service which blocks malware. The forensic unit shall have procedures for filtering or blocking phishing emails or messages, before they reach users.

32.3.16 The forensic unit shall have procedures, or have access to, to update (patch) software and firmware in a timely manner and included in the forensic unit's change procedures to manage any potential impact to the forensic examination process. 'Critical' and 'High' severity patches (as defined by the organisation issuing the patches) for Internet-enabled systems shall be installed promptly. Where this is not possible, then other mitigations (such as physical or logical separation) shall be applied.

32.3.17 Software and firmware that is no longer supported by vendors, should be replaced unless there is a technical or CJS justification for its continued use recorded in the procedure. [97]

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96 Whether software is anti-malware is not determined by the name of the package.

97 For example, legacy software is sometimes required to access old media or for revisiting the analysis of old cases.

32.3.18 All removable storage media, including that believed to be new, shall be scanned using the anti-malware system before use/issue.

32.3.19 The forensic unit should securely configure computers by following the End User Device security principles. [55]

32.3.20 The forensic unit shall have access to backup data to assist recovery from malware. [56] [57]

Management of Removable Storage Media [98]

32.3.21 Procedures for management of removable storage media used by the forensic unit to transfer data (e.g. memory cards, SD cards or flash cards, micro SD) shall include controls related to issue and their use. These procedures shall include wiping /re-formatting of the storage media appropriate to the FSA the media is used in (i.e. typically using a defined secure or forensic method).

32.3.22 Removable storage media shall only be issued to users whose role requires it. Only the minimum interfaces necessary for the use of removable storage media should be enabled on computers and those users to whom those computers are issued should be made aware of the permitted interfaces.

32.3.23 Personal removable storage media shall not be used for the transfer of electronic data - only officially issued removeable storage media shall be used which:

a. Shall be physically secured when not in use;

b. Should not be used to take data offsite unless its contents are secured using appropriate encryption techniques [58]; [99] and

c. Should be subject to accountability with the aim of tracking use and managing loss. [47] [59]

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98 This procedure is for the general transfer of electronic information, it does not relate to item/exhibit and evidence handling.

99 Memory cards used for cameras are excluded from encryption.

The Segregation of Forensic Networks

32.3.24 The forensic unit shall have procedures for the segregation of networks used for forensic science activities from other networks. Networks that do not need to communicate or interact with each other should be separated into different network segments, and only allow users to access a segment where needed. [100] Segregation can be achieved physically or ‘logically’. Logical separation can include access control lists, network and computer virtualisation, firewalling, and network encryption such as Internet Protocol Security (IPSec). [60] [61]

Backups, Recovery and Business Continuity

32.3.25 The forensic unit shall have procedures for business continuity with an incident management plan including backup and retrieval of data, to recover from incidents such as malware (see 32.3.20), theft, fire or hardware failure, whilst ensuring the business can continue to function.

32.3.26 The forensic unit shall identify what electronic data is essential to keeping operations running and make regular backup copies, or where that infrastructure is provided by the larger organisation (e.g. police force) seek assurance the backup is adequate.

32.3.27 The forensic unit shall identify its critical systems and have redundancy arrangements in place. The forensic unit shall test that backups are working to ensure it can restore the electronic information from them in the event of an incident. Offline backups shall be created and stored for as long as necessary to meet the requirements of the CJS.

32.3.28 Where digital data is the evidence, the procedure should be risk-based, balancing consideration of the time between creation of the extracted material, retention of the evidential device and any identified off-site back-up requirement (see also 32.1.2 and 40 - Retention, Recording, Revelation and Disclosure).

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[100] Systems used for different forensic science work may need segregation from each other; for example, internet intelligence and investigation workstations and systems from other digital forensics activities.

32.3.29 Offline backups should be stored at a separate and secure location. [101] [62] [63] The forensic unit may use appropriate cloud services for this back-up of electronic information; ‘offline’ here means digitally disconnected or fully protected from any malware risk when not in use and/or designed and tested to remain unaffected should any incident impact the live environment through robust protection from malware. [64]

32.3.30 The forensic unit shall have an incident management plan [102] which helps staff identify, respond to, and recover from, incidents as well as continue to run the business. The incident management plan should include a communication strategy (which includes appropriate escalation levels to the Senior Accountable Individual, the Regulator and, if accredited, its accreditation body), roles and responsibilities of staff and third parties such as service providers and authorities, as well as contact details for those involved.

32.3.31 The forensic unit shall test its business continuity procedure annually (see 19.1.4). The incident management plan shall also be tested, whether it is part of the overall procedure or separate, to ensure that its electronic information and critical systems can be recovered in the event of an incident.

32.3.32 Revisions to the incident management plan should include lessons learnt to minimise the risk of disruption to the business occurring in the same way again. [47] [59] [65]

Network Security and Mobile Working

32.3.33 The network security and mobile working procedures shall include the management of the network perimeter [103] by using firewalls to create a 'buffer

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101 Ensuring the back-up is adequately protected from the same physical incident that may affect the primary data store such as fire, explosion or theft may be achieved by this being in a separate building not merely a separate room. However, the risk assessment may detail alternative mitigation to be included in, and tested with, the business continuity/incident management procedure. Sole traders may enter into reciprocal storage agreements if they choose to.

102 This may be part of the overall business continuity procedure or a separate IT incident management plan.

103 A network perimeter is the secured boundary between the private and locally managed side of a network, often a company’s intranet, and the public facing side of a network, often the Internet

zone' between the Internet (and other untrusted networks) and the networks used by the business.

32.3.34 The forensic unit shall have procedures to protect its internal networks by ensuring there is no direct routing between internal and external networks (especially the Internet). The forensic unit shall have procedures for securing wireless access to its networks. All wireless access points shall be secured using Wi-Fi Protected Access 2 (WPA2) or WPA3, and only allow known devices to connect to corporate Wi-Fi services.

32.3.35 Where mobile working is required, the forensic unit shall have procedures for ensuring that connections are identified, authenticated [104] and authorised. All electronic information which transits the Internet (and other untrusted networks) shall be protected from eavesdropping and alteration using appropriate encryption such as IPSec and Transport Layer Security (TLS). [52] [53]

32.3.36 All mobile devices shall only have the necessary applications and electronic information to fulfil the business activity that is being delivered outside the normal office environment. If the mobile device supports it, data shall be encrypted at rest. The forensic unit should ensure there are adequate procedures for monitoring network traffic for unusual incoming and outgoing activity that could be indicative of an attack. The forensic unit shall have procedures for testing the security of its networks. [47]

The Use of Cloud-Based Services

32.3.37 The process for the use of cloud-based services shall include procedures to:

a. Determine the business need and end-user requirements;

b. Determine and document the boundary of the cloud and the network perimeter (i.e. is this an internal/private cloud); [105]

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104 The risk is loss of the item so multiple factor authentications should be considered where it is practical and technically possible.

105 Internal cloud-based services may be entirely contained within the organisation’s own network boundary and are therefore the applicability of all the requirements in all of section 31 should be considered and not simply clauses 32.3.37 a – e.

c. Identify what data will be transported, stored and processed, and document the associated risks;

d. Evaluate the security of the service offered; and

e. Understand the residual risks and how these will be managed.

32.3.38 The forensic unit should use cloud providers which meet the National Cyber Security Centre’s (NCSC) cloud security principles. [64] The forensic unit should include within the contract with the cloud-based provider that storage and processing of evidential data using cloud-based services should only be performed from data centres physically located in the UK. The forensic unit should periodically review whether the cloud-based services still meet its business and security needs.

Security Monitoring and Situational Awareness

32.3.39 The forensic unit's security monitoring and situational awareness procedures shall include the generation, capture, retention, storage and analysis of records from its computers and network equipment. The forensic unit's security monitoring procedures shall achieve the following.

a. Provide visibility of communication between their network and other networks (i.e. the Internet or 3rd party suppliers).

b. Capture authentication and access attempts.

c. Provide asset and configuration information. All records shall be stored securely so they are safe from tampering and unauthorised access. All records should be stored for a minimum of 6 months so that they can be used to support incident management. [66] [67]

33. Reference Collections and Databases (Not National Forensic Databases)

33.1.1 Forensic units shall maintain a list of all reference collections and databases used to make inferences and interpretation; this includes, but is not limited to, those internally developed, commercially developed or remotely accessed.

33.1.2 Forensic units shall have a process for determining the requirements of the CJS for internally developed reference collections and databases used to make inferences and interpretations, e.g. through reference to case law.

33.1.3 Information included in all reference collections and databases used to make inferences and interpretations shall be capable of authentication through documentation to its original source, meet a minimum quality standard specified by the owner of the collection or database, be verified for accuracy of transcription on entry to the database, and be auditable for corruption.

33.1.4 Any programs or script for data manipulation employed within databases to make inferences and interpretations shall be validated, either separately or as part of the process or method they are used in as laid out in this Code, e.g. with reference to the impact of any uncertainty of measurement and the risk of false positives/negatives.

33.1.5 All reference collections and databases used to make inferences and interpretations shall be covered by documentation specifying, as a minimum:

a. Their purpose;

b. Their location and identification;

c. Their scope and content;

d. The origin of the data;

e. Any known significant limitations or restrictions;

f. The person responsible for management of the database;

g. The authorisation and competence requirements of organisations/practitioners contributing to the database;

h. The arrangements and format for data collection and submission;

i. The process for authentication or validation of the data;

j. The arrangements and format for data storage;

k. The process for making updates and amendments, and maintaining audit trails;

l. The protocols for access to the database and its interrogation and use;

m. The quality assurance requirements, including those for data integrity, transfer, inconsistency and error checking;

n. The confidentiality and security requirements;

o. The format and content of results and reports from interrogation of the database, including the provision of any caveats relating to any limitations with the results provided;

p. The projected shelf life of the data;

q. The arrangements for review of relevance, use and effectiveness; and

r. All relevant legal, commercial and ethical requirements covering their registration, data content, retention, accessibility or use.

33.1.6 Forensic units should collate the above information on existing as well as new reference collections and databases (used to make inferences and interpretations) and assess if any persisting gaps will affect critical findings and/or admissibility.

34. Equipment

34.1 Computers and Related Automated Equipment

34.1.1 The forensic unit shall ensure that any software used on computers or automated equipment is assessed for its impact on results and is documented in sufficient detail based on that assessment. This includes any software developed, configured or modified by the forensic unit, or by other outside agencies working on the forensic unit’s equipment.

34.1.2 Commercial off-the-shelf software and software tools whose operation has an impact in obtaining results will require validation, or any existing validation to be verified, as laid out in section 30.3 - Validation of Methods.

34.1.3 The forensic units’ procedures shall include what testing or verification is required have prior to computers and/or related equipment being returned to service e.g. when returning from calibration/maintenance or following a move.

34.1.4 Other commercial off-the-shelf software (e.g. Microsoft ® Word and Excel) that does not directly contribute to results obtained shall be considered suitably

validated for general use. However, calculations embedded in spreadsheets that do not form part of a validated electronic process shall be included in the required systematic checks.

34.1.5 The forensic unit shall maintain records of software products installed on computer systems critical to the production of analytical results, and shall ensure configuration control so that only specified versions of software, settings and firmware, if applicable, are used. [106] The forensic unit shall have documented procedures for configuration management to ensure that all changes to software/hardware are controlled, and that all individual software installations are known and are periodically checked that the correct version is installed and no unauthorised modifications have occurred, e.g. by service engineers.

34.1.6 The forensic unit shall have a policy for all items/exhibits of equipment containing sensitive data to ensure the data:

a. Are secure during any maintenance visit;

b. Remain secure while off-site (e.g. for servicing); or

c. Have been removed or securely overwritten prior to removal from site or disposal.

35. Measurement Traceability - Intermediate Checks

35.1.1 Reference standards/materials and reagents shall not be used beyond the expiry date, where provided, unless it is verified that they remain fit for purpose beyond that date.

36. Handling of Items/Exhibits

36.1 General

36.1.1 Any actions prior to the forensic staff attending the scene of incident or the forensic staff taking control of items/exhibits are outside of the control of the

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[106] Older versions of software may be needed for compatibility with work being undertaken related to older products, or to maintain the validated systems’ configuration.

forensic staff. The forensic staff shall have processes to capture any observations about the scene or received items/exhibits that might have an impact on the examination or subsequent analysis.

36.2 Items/Exhibits at the Scene of Incident

36.2.1 Before items/exhibits are recovered from the scene of incident, the practitioner shall consider the on-site conditions to ensure that the items/exhibits can be recovered and documented in line with the forensic strategy.

36.2.2 If doubts remain about whether the items/exhibits can be properly recovered in the prevailing circumstances, the commissioning party should be consulted (before proceeding) about whether and how the available resources should be used. For example, are additional ‘specialist’ examiners or technical resources required to conduct the examination or testing in situ.

36.2.3 The forensic unit shall ensure that its scene examiners are provided with and implement the relevant procedures to minimise the risk of cross-contamination between different scenes, items/exhibits, suspects, witnesses and victims (see 29.2). [31]

36.2.4 The forensic unit shall have documented procedures to ensure that items/exhibits recovered from the scene are appropriately:

a. Labelled;

b. Protected/packaged;

c. Preserved;

d. Listed on a schedule of recovered items;

e. Transported;

f. Stored;

g. Transferred for analysis/examination; and

h. Retained, returned or disposed of in compliance with documented procedures.

36.2.5 The forensic unit shall ensure that anti-contamination measures appropriate to the FSA, the analyte of interest and the risk of contamination are employed for

any vehicles and equipment used for scene examination purposes or the transport of items/exhibits and personnel.

36.2.6 Where a large quantity of potentially evidential material is available and a representative sample needs to be taken for analysis/examination, including for presumptive testing, the practitioner should consider this in the sampling strategy.

36.2.7 The forensic unit shall protect the items/exhibits during processing and delivery to the intended destination, through handling, packaging, storage and protection, and ensure that practitioners who may subsequently examine or analyse the items/exhibits are aware of anything that may have potentially compromised the items/exhibits integrity.

36.2.8 The forensic unit shall ensure that recovered items/exhibits are clearly and uniquely identified within the organisation rather than simply within the case. A combination of practitioner initials and identity number, plus date is not considered sufficiently discriminating. Although adoption of such a system would not devalue or invalidate the item if properly handled, it adds a risk which should be avoided.

36.2.9 Where applicable, the identity and location of the item/exhibit within the scene shall be documented or characterized using as appropriate for example using plans, measurements, diagrams, photography and/or photogrammetry.

36.2.10 For this purpose, a ‘chain of custody’ record shall be maintained detailing the location of the item/exhibit at all times from acquisition of items/exhibits which details each person who takes possession of the item/exhibit and when, or the location of the item/exhibit (e.g. if in storage). The chain of custody record shall include details of when the items/exhibits are destroyed or the circumstances under which they are released and to whom.

36.2.11 The forensic unit shall also ensure that the identification details provided with each item/exhibit, on the item/exhibit label and accompanying submission form, remain with the item/exhibit throughout its life, so as to ensure that, using a combination of the case number and /exhibit identification, no items/exhibits can be confused physically or when referred to in records or other documents.

36.2.12 All items/exhibits and associated documentation generated during scene examination shall be independently checked to ensure compliance with the requirements for acceptance set by the forensic unit. This should be at the appropriate stage to control the risk, typically prior to storage or submission for further examination/analysis to another forensic unit or section of the forensic unit.

36.3 Receipt of Cases and Items/Exhibits at the Forensic Unit

36.3.1 The forensic unit shall have procedures for the transportation, receipt [107], handling, protection, storage, retention, and/or disposal of items/exhibits.

36.3.2 These shall include a documented case acceptance policy which should include risk-based rejection procedure [108] for the handling of an item/exhibit for examination arising from, but not limited to:

a. Not being able to legally hold the material (e.g. not possessing necessary licences);

b. Having health and safety concerns about the submission or the ability to handle the material safely;

c. Not having the appropriate quality standards to do the examination requested;

d. A missing item/exhibit label;

e. A low level of agreement between the details on an item/exhibit label and those on the accompanying submission documentation;

f. Inconsistency between the details on an item/exhibit label and/or accompanying submission documentation and what the item/exhibit actually is;

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[107] This should include procedures for checking and booking in items, that consider the risk of opening sealed containers without obtaining an immediate inventory i.e. particularly important for cases involving controlled substances/items, but relevant in any area where item/exhibit loss could be a consideration.

[108] Whilst the non-FSA work of commissioning parties is outside the scope of this Code it is good practice for such parties to have procedures for receipt of cases and checking items/exhibits being returned from the forensic unit.

g. Illegibility in any information on an item/exhibit label;

h. There being conflicting information on the label(s) on an item/exhibit;

i. Appropriate control samples not being submitted;

j. Repeat of the same identification details on different item/exhibit labels;

k. Inadequate or improper untimely packaging or sealing of an item/exhibit that could prejudice its integrity;

l. Previous handling, storage or evidence of tampering with an item/exhibit that could prejudice its integrity; and

m. Insufficient material being available for meaningful examination or analysis.

36.3.3 If the forensic unit is unable to accept the submission the reasons for rejection shall be recorded.

36.3.4 The process for reception of items should include identification of items which should be subject to additional safety and/or security provisions.

36.3.5 Any evidence of improper tampering with an item/exhibit or suggesting such tampering may have occurred or been attempted, shall be investigated (see 25.1.3). If the outcome of the investigation indicates a deliberate attempt has been made to affect the results of the examination, the Senior Accountable Individual shall be informed to decide the appropriate escalation (which may include involvement of the police), which shall include notifying the Regulator.

36.3.6 The case acceptance procedure shall also specifically address the handling and receipt or rejection of potentially hazardous items/exhibits that might pose a risk to the health or safety of staff, [109] potentially compromise other work carried out at the forensic unit’s facility, [110] or which may not be lawfully retained or handled if accepted by the forensic unit. [111]

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109 For example, when handling hypodermic syringe needles or blood samples.

110 For example, firearms, bulk drugs seizures or explosives, where the forensic unit also carries out gunshot residue analysis or trace drugs or explosives analysis, unless separate reception arrangements and accommodation are provided for these.

111 For example, cases involving human tissues, drugs, firearms or explosives, for which there may be specific health and safety legislation requirements or specific licensing required.

36.4 Item/Exhibit Handling, Protection and Storage

36.4.1 The forensic unit shall ensure that item/exhibit handling policies and procedures address continuity requirements including, but not limited to that:

a. The item/exhibit can, at all times when in the possession or control of the forensic unit, be uniquely identified so can be conclusively shown to be the item/exhibit submitted to the forensic unit;

b. Any specific measures that might apply due to the type of item upon receipt or be required to secure item/exhibit should identified i.e. alleged controlled substance, alleged firearm;

c. Any material recovered from or derived from an item/exhibit or sub-sample of an item/exhibit can be conclusively linked to the item/exhibit or sub-sample from which it came;

d. Any result can be conclusively linked back to the item/exhibit from which it came, or the key equipment used to create the result;

e. The forensic unit can show whether the item/exhibit was retained, returned to the organisation that submitted it, or destroyed;

f. The measures to secure items/exhibits and/or derived material to ensure that they cannot be tampered with or otherwise compromised without detection:

g. Only personnel authorised by management shall have access to the retained materials; and

h. Movement of material in and out of the facility shall be properly recorded (see 29.1 - Examination Facilities).

36.4.2 The forensic unit shall, as far as possible, store the item/exhibit in a manner which prevents deterioration.

36.4.3 The forensic unit shall, as far as possible, preserve the item/exhibit, or part of the item/exhibit, in its original form to allow for independent re-examination or testing. If an insufficient quantity of the item/exhibit remains for independent re-examination or testing, or the form of the item/exhibit is altered, the forensic unit shall ensure that details of the item/exhibit in its original form are recorded in sufficient detail for an independent examiner to be able to check that correct

procedures and techniques have been used and that the results obtained appear valid.

36.5 Item/Exhibit Return and Disposal

36.5.1 The forensic unit shall have an agreement with its commissioning party for the return or disposal of items/exhibits once the examination has been completed. [112]

36.5.2 Forensic units may deal with material that is subject to legal control or prohibition on possession, production or use. Policies covering such items/exhibits should reflect any legal control or prohibition covering retention, the return to the organisation that submitted the item/exhibits, or destruction. Examples of such items/exhibits include, but are not limited to:

a. Human tissue; [113]

b. Drugs;

c. Firearms; and

d. Indecent images of children.

36.5.3 Human tissue is held by the police or a forensic unit as part of the CJS process it is, generally, outside the provisions of the Human Tissue Act 2004 [68] (see s39 of that Act). However, it is important that such tissue is managed appropriately, and the guidance issued by the Human Tissue Authority is of value in determining appropriate processes. When the tissue ceases to be required for CJS purposes it may become subject to the provisions of the Human Tissue Act 2004 [68]. The codes and guidance issues by the Authority should be considered when such situations arise.

36.5.4 If items/exhibits are to be returned to the commissioning party, or provided for use in court, the forensic unit shall ensure that the commissioning party or court is made aware of any potential health and safety issues relating to the

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112 Any specific clauses or controls stipulated shall be communicated to any subcontractors or external providers who are authorised to handle the items/exhibits.

113 See the Human Tissue Act 2004 [69].

item/exhibit, or its handling, and take appropriate steps to minimise the risk to the commissioning party or court.

36.5.5 If items/exhibits are deemed too hazardous to return to the commissioning party, they shall be destroyed by the forensic unit in accordance with health and safety legislation, health and safety regulations and Home Office guidelines. [114] The requirements for retention, agreed with the commissioning party, shall also be adhered to.

37. Assuring the Quality of Results

37.1 Inter-Laboratory Comparisons (Proficiency Tests and Collaborative Exercises)

37.1.1 The forensic unit shall review the availability and appropriateness of schemes for inter-laboratory [115] comparisons that are relevant to its FSAs and where relevant its scope of accreditation.[116] [117]

37.1.2 Annex C of ISO/IEC 17043:2010 [69] provides useful information to assist in selection or design of schemes whether the examinations or tests are quantitative, qualitative or interpretive in nature and annex A of the Eurachem

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114 See HOC 40/73: Handling and disposal of blood samples in criminal cases (other than those brought under the Road Traffic Act 1972) [99] this recommends to Chief Police Officers that on completion of examination the sample should be retained at the laboratory and the defence notified that it will be destroyed after 21 days unless they request otherwise. However, if the sample is exhibited, it should not be destroyed without the permission of the committing court. HOC 41/73 [100] provides similar recommendations to HOC 40/73, but to the courts. HOC 125/76 [97] extends the arrangements of HOC 40/73 and 41/73 to the handling and disposal of saliva samples. HOC 74/82 [101]: Disposal of blood samples, saliva samples and swabs stained with body fluid: handling of items/exhibits: extends the arrangements of HOCs 40/73 41/73 and 125/76 to the disposal of swabs stained with body fluid. HOC 25/87 [98] extends the provisions of HOC 74/82 to cover the disposal of urine and any other body samples not previously covered.

115 An inter-laboratory comparison is a widely recognised generic term for an exercise carried out between group of organisations conducing comparable testing activities; laboratory here means the organisation, in this Code it should be read as forensic unit.

116 ISO 17025 [1] requires only suitable externally provided products and services that affect testing activities to be used. This includes proficiency testing services. ISO/IEC 17043:2010 [70] contains recommendations and guidance on the requirements for the operation of PT schemes. These documents should be used as a basis for such an evaluation.

117 UKAS accredits PT providers to ISO/IEC 17043:2010; a list of accredited schemes/providers is available. [72]

publication on proficiency test (PT) schemes [70] includes a checklist which includes consideration of the following.

a. Whether the parameters included in the scheme are similar to those of items/exhibits encountered in the everyday practice of the forensic unit.

b. Whether the strategies for data collection and analysis applied by the PT provider are suitable for the needs of the forensic unit.

c. Whether the method used for assessing the participants’ performance is clearly described by the PT provider and understood by the forensic unit.

d. The competence of a PT provider, for example:

i. Compliance with the requirements of ISO/IEC 17043:2010, e.g. accreditation; [118]

ii. Track record in delivering such schemes;

iii. Reliability of the assigned values; and

iv. Fitness for purpose of criteria for proficiency assessment.

37.1.3 The forensic unit shall participate in appropriate schemes, in order to monitor the validity of its examinations or tests, and its performance, both against its own requirements and against the performance of peer forensic units. [71] [119]

37.1.4 When participating in inter-laboratory comparison schemes, the forensic unit’s own documented methods and procedures shall be used.

37.1.5 Proficiency testing records should include [3]:

a. Full details of the examinations/tests undertaken;

b. Results and conclusions obtained;

c. An indication that performance has been reviewed; and

d. Details of the corrective action undertaken, where necessary.

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[118] UKAS recommends the use of an accredited scheme where one exists. [95]

[119] Forensic units may refer to the European Proficiency Testing Information System [93] or the European Network of Forensic Science Institutes (ENFSI) [94] websites for the availability of proficiency testing (PT) schemes. The appropriateness of such schemes will still need assessing, and the assessment recording.

37.1.6 Unexpected performance in proficiency tests or inter-laboratory comparisons shall be handled as non-conforming testing (25.1 - Control of Non-Conforming Examination and Testing).

38. Reporting the Results

38.1 General [21]

General

38.1.1 The forensic unit shall detail in a procedure roles and responsibilities to ensure the appropriate exchange of information and authorisations. This should cover communication of reports (including evaluative reports) with the commissioning party (and as needed other parties in the CJS), as appropriate, within agreed timescales in accordance with the requirements and needs of each specific case and the known key dates in the criminal justice process.

38.1.2 The forensic unit shall provide early warning of any operational or scientific issues that could affect the timeliness of service delivery to the commissioning party. [120]

38.1.3 The practitioner shall be competent and comply with all relevant sections of the Criminal Procedure Rules [35] and Criminal Practice Directions [27]. Where evidence including opinion is provided the practitioner shall comply with the requirements for evidence of opinion [72] and the applicable obligations on expert witnesses. [21] Reports shall comply with applicable legal provisions.

38.1.4 Full records shall be kept of work done and the results obtained in line with other retention policies, even if the commissioning party does not require a detailed report. [121]

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120 See Criminal Procedure Rules [36] 19.2(1)(b)(ii) where warning the court of any significant failure to act as required by a direction includes warning of any substantial delay in the preparation of a report.

121 Documentation of work underpinning reports and statements may be kept separate where it is traceable to the correct reports and statements.

Duty to Court

38.1.5 Expert witnesses act as independent advisors to the court and this role creates obligations, to the court, which override any duty to the commissioning party (or anyone else). [21]

38.1.6 Persons acting as an expert witness shall not do anything which is contrary to their obligations to the court or fail to do something which is required by that duty.

Declarations of Compliance and Non-Compliance with Required Standards [122] [72] [73]

General

38.1.7 All practitioners shall disclose in reports intended for use as evidence (other than as evidence of agreed fact), their compliance, or non-compliance, with this Code. [123] [124]

38.1.8 This Code incorporates the FSA definitions (see ###) so a practitioner will be compliant with this Code only if they also comply with requirements for their discipline set out in the relevant FSA definition (e.g. accreditation to ISO 17025 [1] and adherence to this Code or to an appendix to this Code). [125]

38.1.9 All practitioners shall declare/disclose compliance with this Code in reports intended for use as evidence (other than as evidence of agreed fact) in the following terms, or in terms substantially the same: [110]

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122 Non-compliance is considered to be information that could significantly detract from the credibility of a witness and may have a bearing on reliability. In England and Wales, disclosure of such matters is not restricted to experts (see the Criminal Procedure and Investigations Act 1996 [102], R v. Ward [1993] 1 W.L.R. 619 and Kumar v. General Medical Council [2012] EWHC 2688 (Admin), or to the prosecution (see Criminal Practice Directions [28] V 19B (1) 13 and Criminal Procedure Rules [36] 19.3(3)(c)).

123 This does not apply to a Streamlined Forensic Report 1 (SFR1) as that is not intended to be used as evidence (other than as agreed fact). However, a SFR1 does require a declaration about accreditation; see sub-section Types of report in the CJS.

124 See Criminal Practice Directions [28] V 19B (1) 13 “I confirm that I have acted in accordance with the code of practice or conduct for experts of my discipline, namely [identify the code]”.

125 If the set requirement is accreditation to ISO 17025 [1] and this Code, but the practitioner’s forensic unit only holds accreditation to ISO 17025 [1] without including this Code then it is not fully compliant and the practitioner must disclose this.

a. ‘I confirm that, to the best of my knowledge and belief, I have acted in accordance with the Code of Practice published by the Forensic Science Regulator [insert issue]’; or

b. ‘I confirm that, to the best of my knowledge and belief, I have acted in accordance with the Code of Practice published by the Forensic Science Regulator [insert issue] in all aspects that relate to my personal conduct. However, my organisation is not yet compliant with the required standard (insert standard not met) for (insert discipline/sub-discipline or FSA relevant to the present case). Annex [x] [126] details the steps taken to mitigate the risks associated with this aspect of non-compliance’; or

c. ‘I have not complied with the Code of Practice published by the Forensic Science Regulator [insert issue]. The nature of this non-compliance, to the best of my knowledge and belief, is that I am not/my organisation is not (delete as applicable) yet compliant with clause [insert clause from the Code of Practice] and the required standard for (insert discipline/sub-discipline or FSA relevant to the present case). Annex [x] details the steps taken to mitigate the risks associated with this non-compliance.’

38.1.10 Where, in compliance with the provisions of section 38.1.9 , a practitioner describes the steps taken to mitigate a non-compliance with this Code that description shall, in particular, address the following issues.

a. The competence of the practitioners involved in the work.

b. The validity of the method employed.

c. The documentation of the method employed.

d. The suitability of the equipment employed (including the approach to maintenance and calibration).

e. The suitability of the environment in which the work is undertaken.

38.2 Types of Report in the CJS

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[126] This is an annex to the report to be produced by the practitioner or forensic unit which is intended to cover any mitigation to non-compliance with the Code. [74] [73]

38.2.1 Forensic units, or practitioners working in forensic units, may be required to supply advice to support the judicial process which is covered by the requirements in this Code including the provision of the following.

a. Interim progress reports [127] to support criminal investigations. These are initial forensic reports used to inform an enquiry, interview or strategy. This report is not intended for use as evidence but may be disclosable as unused material and does not require a statement of compliance with this Code (see 38.1.7 et seq - Declarations of Compliance and Non-Compliance with Required Standards).

b. Streamlined Forensic Reports (SFR) [74]. These have been introduced for certain evidence types for use in the case management process to establish the level of agreement between the defence and the prosecution.

i. The SFR1 is a summary of the evidence served to determine whether there is any agreement of the evidence, or to ascertain whether there are any issues in dispute. It is deliberately not presented in an admissible format as it is not intended to be presented at trial other than as agreed fact and it does not need to comply with provisions with regard to reports contained in the Criminal Procedure Rules 19.4 [35] or Criminal Practice Directions V 19B [27]. It does however require a statement of compliance with this Code and a statement of whether the results are from a method which requires accreditation and if so, if the method is within the forensic unit’s schedule of accreditation. [128] [129]

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127 ILAC G19 [3] section 4.9 includes oral reports, including the requirement to record the information conveyed.

128 The Crown Prosecution Service (CPS) has stated that, in England and Wales, “Statements and Streamlined Forensic Reports (SFR1 and SFR2) should state whether the organisation or laboratory concerned is accredited, whether the forensic evidence relates to DNA and fingerprint evidence or other forensic disciplines.” This position is to facilitate the policy described in the CPS Internet section on evidence of opinion. [127]

129 In cases where those preparing the SFR1 are aware of further information that might meet the test for common-law disclosure set out above, that information should be communicated to the investigator and by the investigator to the prosecutor using form MG6 (or its equivalent).

ii. The SFR2 is produced to answer the issue(s) raised by the defence in response to the SFR1, it is intended to be presented in evidence, unless a full evaluative report is required instead. Therefore, an SFR2 does require a statement of compliance with this Code and if it is providing evidence of opinion it requires an expert’s declaration under Criminal Procedure Rules 19.4 [35].

c. Reports (a statement is a type of report) for use in court proceedings.

i. Factual reports require a statement of compliance with this Code.

ii. Expert reports including opinion evidence require a declaration under Criminal Procedure Rules 19.4(j) [35] and 19B of the Criminal Practice Directions V [27] which should include a statement of compliance with this Code as part of the declaration required by 19B of the Criminal Practice Directions V [27].

iii. The court may extend a number of the requirements applicable to evidence of opinion to expert evidence of fact (See Part 19 Criminal Procedure Rules [35]).

d. Certificates (e.g. issued under provisions of the Road Traffic Offenders Act 1988) [75].

i. The content of a certificate must comply with the provisions of the statute which created the right to use the certificate. Unless the statute prohibits it, a certificate should include a statement of compliance with this Code.

38.3 Opinions and Interpretations

General

38.3.1 Where opinions and interpretation are to be included in a forensic unit’s schedule of accreditation, the forensic unit will need to ensure that it is acting in compliance with the UKAS publication LAB 13 [76] and ILAC-G19 [3] section 4.9. If the forensic unit is accredited by an accreditation body other than UKAS it shall be in compliance with ILAC-G19 [3] and the requirements of that body in relation for opinions and interpretation.

Evaluative Opinions

38.3.2 A forensic unit providing evaluative opinion evidence shall meet the following requirements.

a. The policies and procedure for case assessment and interpretation shall be part of the quality management system.

b. The policies and procedures for making reports of evaluative opinion shall be part of the quality management system. [130]

c. The method for evaluation shall be validated according to this Code.

d. The policies and procedures shall require there is clarity in any report as to the source(s) of data used in forming the evaluative opinion. [131] [132]

e. Experts providing evaluative opinion shall be demonstrably competent to do so (see also 28.3.7).[133]

f. Any statistical models and assumptions involved in the evaluation shall be clear to the CJS and shall be valid.[134] [135]

g. Processes for the peer review of evaluation shall be part of the quality management system. [136]

38.4 Regulator’s Concerns

38.4.1 As discussed in section 25.3 the Regulator may deal with concerns about the work of a forensic unit as part of routine monitoring, by means of a Regulator’s investigation or compliance action.

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130 This is a requirement of LAB 13 section 6.4. [77]

131 This is a requirement of LAB 13 section 6.21. [77]

132 This is a requirement of Part 19 CrimPR. [3]

133 This is a requirement of LAB 13 sections 6.6, 6.13 and 6.14 [77]. It is also a requirement of ILAC G19 4.8.3. [3]

134 This is a requirement of LAB13 section 6.10. [77]

135 The validity of the model employed should be addressed as part of the validation of the method (see Methods and Method Validation 30.3.19 and 30.3.70.

136 This is a requirement of ILAC G19 section 4.8.2. [3]

38.4.2 The forensic unit shall consider whether any activity by the Regulator, as described above, creates an obligation to disclose in reports issued by the forensic unit or its practitioners.

39. Secondary Case Review

39.1 Scope

39.1.1 This section of this Code applies to situations where the work of a forensic unit (the initial unit) is reviewed by a different forensic unit. This covers, but is not limited to, the following situations.

a. A review commissioned by the same party that commissioned the initial work (e.g. a cold case review).

b. A review commissioned by another party to the case (e.g. a defence examination).

c. A review commissioned by a body with legal authority to do so (e.g. the Criminal Cases Review Commission or a public enquiry).

d. A review commissioned by the Forensic Science Regulator.

39.1.2 There may be a number of secondary reviews in any case and these may be concurrent or sequential.

39.2 General

39.2.1 The initial forensic unit shall only assist with a case review of that work if it is:

a. Instructed to do so by the party which commissioned the work; and/or

b. Provided with legal authority requiring it to assist.

39.2.2 A forensic unit instructed, or required, to assist in a case review shall have defined policies and procedures to facilitate access by the forensic unit undertaking the review to the extent authorised or required.

39.2.3 The policies and procedures shall ensure the security and integrity of the items/exhibits and records requested for review, but must also ensure the confidentiality of other work in progress or previously undertaken by the forensic unit where that does not fall within the scope of the case review.

39.2.4 A forensic unit commissioned to perform a case review shall ensure that any tests or examinations it conducts, or are conducted on its behalf by someone other than the forensic unit which performed the work subject to review, are carried out in accordance with the requirements set out in this Code.

39.2.5 Where a forensic unit is commissioned, by a party other than the prosecution, to review work of a forensic unit commissioned by the prosecution it shall:

a. Comply with any conditions attached by the prosecutor to the release of the items/exhibits, or parts of items/exhibits; or

b. Act within the scope of authority of its commissioning party if that party has legal authority to act beyond the approval of the prosecutor.

39.2.6 The forensic unit commissioned to perform the case review shall retain the notes and records it has created in line with this Code.

39.3 Defence Examinations [137]

39.3.1 A forensic unit commissioned by the defence seeking access to any items/exhibits, records or equipment etc shall first obtain approval for access to these from the prosecutor (or if a prosecuting authority is not involved at that stage from a person with authority over the material).

39.3.2 The forensic unit commissioned by the prosecution shall make available to the forensic unit commissioned by the defence only what has been deemed by the prosecutor or court to be relevant. Copies of such case file records, documents and supporting information, etc. that have been reasonably requested by the forensic unit commissioned by the defence and been deemed relevant may then be provided in hard copy or secure electronic form [138] and be taken into their possession for examination away from the premises of the forensic unit commissioned by the prosecution.

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137 The content of this section reflected the Crown Prosecution Service position with regard to control of items/exhibits.

138 The Legal Aid Agency’s position on charges levied upon the defence by prosecution forensic science laboratories is available in their publication ‘Guidance on forensic science laboratory charges in criminal matters’. [96]

39.3.3 The forensic unit commissioned by the defence shall retain the notes and records it has created in line with this Code. Material supplied by the forensic unit commissioned by the prosecution shall only be used for the specific case(s) for which the material was provided. [139]

39.3.4 Material supplied by the initial forensic unit is subject to the Data Protection Act 2018 [77] and may be subject to Police and Criminal Evidence Act 1984 [78] as amended by the Protection of Freedoms Act 2012 (e.g. fingerprints and DNA) [79]. [140]

39.3.5 The forensic unit commissioned by the prosecution shall only release items/exhibits (or evidential material recovered from them) to the defence for examination or testing away from the premises of the forensic unit commissioned by the prosecution on receipt of written instructions from the prosecutor and/or the court. Where the examinations or testing might affect the condition of the items/exhibits, the forensic unit commissioned by the prosecution shall ensure that the prosecutor and/or the court is made aware of this before the items/exhibits are released and that this is recorded.

39.3.6 The forensic unit commissioned by the prosecution shall ensure that all examinations and tests carried out on its premises by the forensic unit commissioned by the defence are adequately supervised, to ensure that they are carried out in accordance with the instructions given by the prosecutor and that nothing is altered, damaged or destroyed without the prior permission of the prosecutor.

39.3.7 The forensic unit commissioned by the prosecution shall ensure that all items/exhibits (or parts of items/exhibits, or evidential material recovered from them) that are to be released to the defence are recorded, securely packaged, labelled and any conditions that apply to handling and retention are recorded in

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139 The forensic unit commissioned by the prosecution may require, if it chooses to, that supporting supplementary material (e.g. manuals, SOPs) is returned by the defence’s forensic unit or that the supplied copies are destroyed, as appropriate, once the case is concluded.

140 The Protection of Freedoms Act 2012 [80] modified the Police and Criminal Evidence Act 1984 [79] to have specific controls for the destruction, retention and use of biometric data which means certain requirements may be stipulated as a condition of access to any third party which is authorised to handle material.

writing (e.g. from the court, prosecution, commissioning party). The forensic unit commissioned by the prosecution shall also retain a record, signed by a person action on behalf of the receiving party, of the transfers for continuity purposes.

39.3.8 The forensic unit commissioned by the prosecution shall check the integrity and continuity records of the returned items/exhibits, or parts of items/exhibits, or records for compliance with any conditions of release. Any deficiency in these respects upon return shall be communicated promptly to the prosecutor and the commissioning party, e.g. the police.

40. Retention, Recording, Revelation and Disclosure

40.1.1 All practitioners and forensic units shall comply with legal obligations on retention of evidence, revelation to the commissioning party and disclosure. [22] [21]

40.1.2 The forensic unit shall have a retention policy which ensures that retention of records pertinent to the FSA are maintained for at least the minimum period of to fulfil the legal obligations on retention of evidence. The retention policy should include consideration of the following.

a. The retention period for records that that satisfy the requirements of legislation, its accrediting body, the party commissioning the work [22] and this Code. The retention of records policy shall consider the following.

i. Full records shall be kept of work done and the results obtained in line with other retention policies, even if the commissioning party does not require a detailed report (including any statement).

ii. Obsolete/superseded documents taking into account commissioning party [22], regulatory and legal requirements (see section 22).

iii. Non-conformities or complaints and of the subsequent reviews and outcomes in line with the case file retention period

iv. For the period of record retention, traceability shall be maintained for all names, initials and/or identifiers. These should be legible and understandable.

v. Training manuals, training and competence assessment records in line with the policy for retention of case files.

40.1.3 The retention policy shall ensure the retention, return or destruction items/exhibits (see 36.5 – Item/Exhibit Return and Disposal) meets the legal obligations placed on the forensic unit, or assists or at least does not interfere with obligations placed on the commissioning party.

40.1.4 Forensic units can be the commissioning body, with external forensic units acting as sub-contractors or external service providers. The retention requirements for items/exhibits and any copies of items/exhibits should be set out in any contractual agreements between the commissioning body and forensic unit being commissioned (see section 24).

40.1.5 Original items/exhibits collected or seized by, or submitted to, forensic units should be returned to the commissioning body, normally as soon as possible after the FSA is complete and or the case is reported, except where:

a. They fall within the special provisions such as being a biohazards or have other controls stipulated by the commissioning body;

b. They are/were submitted to NaBIS; and/or

c. Agreement has been reached for the forensic unit to retain them, or part of them, under specialised storage conditions, for an agreed and lawful purpose.

40.1.6 The Criminal Procedure Rules place requirements on all parties who want to introduce evidence of opinion to assist with access to the records of examinations, measurements, tests or experiments which were used to generate the opinions expressed by the expert. However, it is not a general right for access to all information the forensic unit is required to retain. [141]

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[141] Under Rule 19.3(3)(c), anything which the party serving the report it is aware of which might reasonably be thought capable of undermining the reliability of the expert’s opinion shall be disclosed, this includes the lack of an accreditation or any other commitment to prescribed standards where that might be expected (see CrimPD V 19A.7). However, under Rule 19.3(3)(d), the Standard Operating Procedure for the FSA is not a record of any examination, measurement, test or experiment on which the expert’s findings and opinion are based. Such documents may be disclosed, but there is no automatic right, and access in other cases does not establish such a right.

40.1.7 Forensic units commissioned by the prosecution must support the disclosure process and provide access to the defence to material identified as relevant by the prosecution. [26]

40.1.8 All documents, items/exhibits and evidential material recovered from items/exhibits that are retained by forensic units shall be archived in secure storage, in conditions to prevent damage or deterioration, and indexed so as to facilitate orderly storage and retrieval. [142]

40.1.9 Only personnel authorised by management shall have access to the retained materials. Movement of material in and out of the archives shall be recorded.

41. Demonstration of Compliance

41.1 General

41.1.1 The Regulator requires, for certain FSA, that forensic units shall demonstrate compliance with this Code in a particular manner.

41.1.2 Where the Regulator has established such a requirement it is set out in section 11 and in the appendix relevant to the FSA.

41.2 Accreditation

General

41.2.1 For any FSA the Regulator may require a forensic unit undertaking the FSA to achieve and maintain any combination of the following.

a. Accreditation to an appropriate international standard. [143]

b. The accreditation includes adherence to the requirements of this Code.

41.2.2 All forensic units undertaking an FSA which is subject to this Code are bound by this Code (which may include, or be restricted to, one, or more, of the appendices) to the extent set out in the appendices. The method of

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142 The cost of archiving documents relating to the forensic unit’s testing and examinations is a business cost to be borne by the forensic unit. Reimbursement of the costs for archiving items/exhibits and evidential material recovered from items/exhibits is a business matter to be agreed between the forensic unit commissioned by the prosecution and the commissioning party (e.g. police).

143 A standard published by the International Organization for Standardization.

demonstrating compliance with this Code is through accreditation to ISO 17025 [1], ISO 17020 [2] and/or ISO 15189 [18] with adherence to this Code recorded in the schedule of accreditation. There may be exceptions to this requirement, and they will be set out in the appendices.

41.2.3 The appropriate international standard, or standards, for FSA subject to an accreditation requirement is provided at section 11 and in the relevant appendices.

41.2.4 The requirement for accreditation may incorporate the application of documents the Regulator considers to be relevant (e.g. ILAC-G19 [3]). Such documents will be listed in section 13.3 - Normative References.

41.2.5 Accreditation to an international standard will only be considered to have met the requirement if:

a. The schedule of accreditation covers the FSA (subject to the provisions with regard to infrequently used methods); and

b. The forensic unit has signed a waiver of confidentiality to allow the accreditation body to share information with the Regulator.

New Methods

41.2.6 It is recognised a new method may require a period of time from introduction to obtain suitable data to demonstrate the operation of the process or procedure satisfactorily for an accreditation body to include this method within the forensic unit’s schedule of accreditation. Forensic units intending to introduce such methods should consider the applicability of the provisions around infrequently used methods set out in section 30.3.49 et seq and/or discuss options with the accreditation body. [144]

[144] Certain parallel or duplication of processing may be used within the same organisation to satisfy this requirement, provided splitting casework does not render the sample suboptimal or introduce significant limitations.

Infrequently Used Methods

41.2.7 Where this Code establishes, for an FSA, a requirement for accreditation to an international standard the forensic unit shall achieve and maintain such accreditation.

41.2.8 The schedule of accreditation shall cover the FSA but it is not required to cover methods which are infrequently used methods within the provisions of section 30.3.49 et seq.

41.2.9 Nothing in sections 41.2.7 and 41.2.8 should be taken as overriding the provisions of The Accreditation of Forensic Service Provider Regulations 2018 [80].

Exigent Circumstances

41.2.10 Where accreditation is required, and exigent circumstances mean that a method other than that as detailed in the schedule of accreditation needs to be used and there is no legal impediment, [145] this should be made clear to the commissioning party and the fact that accreditation should apply and was not held should be declared in any reports. Section 38.1.7 et seq Declarations of Compliance and Non-Compliance with Required Standards details some options for declarations. The expectation is that, where any required standard is not met fully, in addition to the declaration a separate annex [146] to the report is also produced which details how the risk is mitigated.

Accreditation Bodies

General

41.2.11 Any requirement for accreditation will only be achieved if the accreditation is issued by an accreditation body recognised by the Regulator.

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145 See also The Accreditation of Forensic Service Providers Regulations 2018 [16], The Accreditation of Forensic Service Providers (Amendment) Regulations 2019 [105] and European Union (Future Relationship) Act 2020 [106].

146 Producing an annex dealing with issues arising from partial or non-compliance allows the complex issue to be dealt with in the statement/report and could allow forensic units to produce standard lines to take for certain methods. Further detail on the content of the annex is available in the Regulator’s publications on reports and statements. [73]

41.2.12 An accreditation body will only be recognised by the Regulator if the following conditions are met.

a. The body is recognised as an accreditation body by the Government of the country/territory in which it operates.

b. It provides, or is seeking to provide, accreditation in a country/territory where it is legal for it to do so.

c. It will only accredit forensic units against this Code where the unit has signed a confidentiality waiver as required by section 41.2.5.

d. It incorporated accreditation to this Code in the Schedule of accreditation.

e. The requirements of ILAC G19 [3] are incorporated into the accreditation process.

f. It has entered, and operates in accordance with, a data sharing agreement with the Regulator which addresses the issues in section 41.2.14 .

41.2.13 The Regulator will publish, and amend as appropriate, a list of recognised accreditation bodies.

Data Sharing

41.2.14 The data sharing agreement mentioned in section 41.2.12 must achieve the following.

a. The accreditation body must be able to share any concerns or information about a forensic unit with the Regulator.

b. The Regulator must be able to share any concerns or information about a forensic unit with the accreditation body.

c. The accreditation body must be able to provide the Regulator with any information about the number of bodies accredited.

41.2.15 The Regulator may share information related to any quality concerns about a forensic unit with the appropriate accreditation body or accreditation bodies.

UKAS

41.2.16 UKAS will at least in non-scene based FSAs where this Code requires accreditation, assess forensic units undertaking FSAs against ISO 17025 [1] or

ISO 15189 [18] [147] utilising any of the relevant UKAS laboratory publications [81], ILAC-G19 [3] and the supplementary requirements of this Code, and will, if the forensic unit has achieved the requisite standards, include compliance with this Code in the Schedule of Accreditation. [148] UKAS can assess forensic units providing FSAs at scenes of incidents [149] against ISO 17020 [2], ISO 17025 [1], ILAC-G19 [3], ILAC-P15 [16], this Code, and the inspection recommendation and guidance publication UKAS-RG 201 [17].

Accreditation Issues

41.2.17 The Regulator has based the accreditation requirements in this Code on the use of the international standards ISO 17020 [2] and ISO 17025 [1].

41.2.18 Accreditation to ISO 15189 [18] is a suitable alternative to ISO 17025 [1] for undertaking certain FSA, provided that ‘Forensic Testing/Analysis’ is clearly indicated in the scope of accreditation; this means that the forensic unit has been assessed in accordance with ISO 15189 [18] taking into account ILAC-G19 [3]. The FSA for which accreditation to ISO 15189 [18] is appropriate are set out in the FSA definitions.

41.2.19 Other standards used for certification of organisations that provide scientific services – e.g. Good Laboratory Practice (GLP) [82] regulations and Good Manufacturing Practice (GMP) [83] are not alternatives to ISO 17020 [2], ISO 17025 [1] or ISO 15189 [18], although they do overlap to some extent and provide compatible guidance on good practice.

147 Where accreditation is the requirement in the definition of the Forensic Science Activity.

148 The Regulator has a Memorandum of Understanding with the national accreditation body UKAS, agreements with other national accreditation bodies may be entered into if required.

149 The term ‘scenes of incident’, includes scenes prior to establishing whether a criminal or illegal action has taken place and relevant locations, for example where a body is found.

Part F - General Information

42. References

[1] International Organization for Standardization, “BS EN ISO/IEC 17025:2017, General requirements for the competence of testing and calibration laboratories”.

[2] International Organization for Standardization, “BS EN ISO/IEC 17020:2012, General criteria for the operation of various types of bodies performing inspection”.

[3] International Laboratory Accreditation Cooperation, “ILAC-G19:08/2014, Modules in a Forensic Science Process,” [Online]. Available: https://ilac.org/latest_ilac_news/ilac-g19082014-published/. [Accessed 12 09 2021].

[4] Forensic Science Regulator, “Codes of Practice and Conduct for forensic science providers and practitioners in the Criminal Justice System - Issue 7,” [Online]. Available: www.gov.uk/government/collections/forensic-science-providers-codes-of-practice-and-conduct. [Accessed 18 09 2021].

[5] House of Commons Select Committee on Science and Technology, “Forensic Science Service,” 2011.

[6] House of Commons Select Committee on Science and Technology, “The work of the Biometrics Commissioner and the Forensic Science Regulator,” 2019.

[7] House of Commons Select Committee on Science and Technology, “Biometrics Strategy and Forensic Services,” 2018.

[8] House of Lords Select Committee on Science and Technology, “Forensic Science and the Criminal Justice System: A Blueprint for Change,” 2019.

[9] Darren Jones MP, “Forensic Science Regulator and Biometrics Strategy Bill,” [Online]. Available: https://bills.parliament.uk/bills/2616/publications. [Accessed 18 09 2021].

[10] “The Forensic Science Regulator Act 2021,” [Online]. Available: www.legislation.gov.uk/ukpga/2021/14/contents. [Accessed 05 09 2021].

[11] House of Lords, “Official Report - 29 April 2021,” [Online]. Available: https://hansard.parliament.uk/lords/2021-04-29. [Accessed 12 09 2021].

[12] House of Commons, “Official Report - 12 July 2007,” [Online]. Available: https://hansard.parliament.uk/commons/2007-07-12. [Accessed 13 09 2021].

[13] House of Commons, “Forensic Science Regulator and Biometric Strategy Bill - Explanatory Notes,” [Online]. Available: https://bills.parliament.uk/bills/2616/publications. [Accessed 25 09 2021].

[14] “Employment Rights Act 1996,” [Online]. Available: www.legislation.gov.uk/ukpga/1996/18/contents. [Accessed 11 09 2021].

[15] “The Interpretation Act 1978,” [Online]. Available: www.legislation.gov.uk/ukpga/1978/30/contents. [Accessed 05 09 2021].

[16] International Laboratory Accreditation Cooperation, “ILAC-P15:07/2016, Application of ISO/IEC 17020:2012 for the Accreditation of Inspection Bodies,” [Online]. Available: https://ilac.org/publications-and-resources/ilac-policy-series/. [Accessed 12 09 2021].

[17] United Kingdom Accreditation Service, “UKAS-RG 201:2015, Accreditation of Bodies Carrying Out Scene of Crime Examination (Edition 2),” [Online]. Available: https://www.ukas.com/wp-content/uploads/schedule_uploads/6456/RG-201-Accreditation-of-Bodies-Carrying-out-Scene-of-Crime-Examination.pdf. [Accessed 12 09 2021].

[18] International Organization for Standardization, “BS EN ISO 15189:2012, Medical laboratories. Requirements for quality and competence”.

[19] International Organization for Standardization, “BS EN ISO/IEC 17000:2020, Conformity assessment. Vocabulary and general principles”.

[20] “The Public Sector Bodies (Websites and Mobile Applications) (No. 2) Accessibility Regulations 2018,” [Online]. Available: www.legislation.gov.uk/uksi/2018/952/contents/made. [Accessed 17 10 2021].

[21] Forensic Science Regulator, “FSR-I-400, Legal Obligations,” [Online]. Available: www.gov.uk/government/collections/fsr-legal-guidance.

[22] National Police Chiefs' Council, “Retention, Storage and Destruction of Materials and Records Relating to Forensic Examinations,” 2021. [Online]. Available: www.fcn.police.uk/sites/default/files/2021-08/NPCC%20Forensic%20Retention%20Guidance%20v1.0.pdf. [Accessed 04 09 2021].

[23] Forensic Science Regulator, Cognitive Bias Effects Relevant to Forensic Science Examinations FSR-G-217, Forensic Science Regulator.

[24] Forensic Science Regulator, “Marker Reference - Policy on Investigations and Complience,” [Online].

[25] “Government Security Classifications,” [Online]. Available: www.gov.uk/government/publications/government-security-classifications. [Accessed 11 09 2021].

[26] Crown Prosecution Service, “CPS Guidance for Experts on Disclosure, Unused Material and Case Management,” [Online]. Available: www.cps.gov.uk/legal-guidance/cps-guidance-experts-disclosure-unused-material-and-case-management. [Accessed 17 11 2020].

[27] “Criminal Practice Directions (Practice Direction (CA(Crim Div); Criminal Proceedings: General Matters) [2015] EWCA Crim 1567,” [Online]. Available: www.gov.uk/guidance/rules-and-practice-directions-2020. [Accessed 05 09 2021].

[28] I. W. Evett, “The Logical Foundation of Forensic Science: Towards Reliable Knowledge,” *Phil. Trans. R. Soc. B,* p. 370, 2015.

[29] D. Rogers and B. Found, “The initial profiling trial of a program to characterize forensic handwriting examiners’ skill,” *Journal of American Society of Questioned Document Examiners,* no. 6, pp. 72-81, 2003.

[30] Forensic Science Regulator, “FSR-G-208, Laboratory DNA: anti-contamination guidance,” [Online]. Available: www.gov.uk/government/collections/forensic-science-providers-codes-of-practice-and-conduct. [Accessed 17 11 2020].

[31] Forensic Science Regulator, “FSR-G-206, Crime Scene DNA: Anti-contamination guidance,” [Online]. Available: www.gov.uk/government/collections/forensic-science-providers-codes-of-practice-and-conduct. [Accessed 17 11 2020].

[32] Forensic Science Regulator, “FSR-G-207, Sexual assault referral centres and custodial facilities: DNA anti-contamination,” [Online]. Available: www.gov.uk/government/collections/forensic-science-providers-codes-of-practice-and-conduct. [Accessed 17 11 2020].

[33] Forensic Science Regulator, “FSR-G-201, Validation,” [Online]. Available: www.gov.uk/government/publications/forensic-science-providers-validation. [Accessed 17 11 2020].

[34] Forensic Science Regulator, “FSR-G-218, Guidance: Method Validation in Digital Forensics.,” [Online]. Available: www.gov.uk/government/collections/forensic-science-providers-codes-of-practice-and-conduct. [Accessed 17 11 2020].

[35] “Criminal Procedure Rules 2020,” [Online]. Available: www.gov.uk/guidance/rules-and-practice-directions-2020. [Accessed 05 09 2021].

[36] Forensic Science Regulator, “FSR-P-300, Protocol: using casework material for validation purposes,” [Online]. Available: www.gov.uk/government/collections/forensic-science-regulator-technical-guidance. [Accessed 17 11 2020].

[37] United Kingdom Accreditation Service, “TPS 68: UKAS Policy on Accreditation of Infrequently Performed Conformity Assessment Activities,” [Online]. Available: www.ukas.com/download/publications/Technical%20Policy%20Statements/TPS-68-Infrequently-Performed-Activities-Edition-2-June-2020.pdf. [Accessed 17 11 2020].

[38] United Kingdom Accreditation Service, “M3003, The Expression of Uncertainty and Confidence in Measurement,” [Online]. Available: www.ukas.com/download/publications/publications-relating-to-laboratory-accreditation/M3003-Expression-of-Uncertainty-and-Confidence-in-Measurement-Edition-4-October-2019.pdf. [Accessed 17 11 2020].

[39] International Laboratory Accreditation Cooperation, “ILAC G17: 01/2021 Guidelines for Measurement Uncertainty in Testing,” [Online]. Available: https://ilac.org/publications-and-resources/ilac-guidance-series/. [Accessed 16 11 2021].

[40] The National Cyber Security Centre, “Secure Sanitisation of Storage Media,” 2016. [Online]. Available: www.ncsc.gov.uk/guidance/secure-sanitisation-storage-media. [Accessed 24 6 2020].

[41] The Centre for the Protection of National Infrastructure, “Secure Destruction,” 2019. [Online]. Available: www.cpni.gov.uk/secure-destruction. [Accessed 24 6 2020].

[42] The National Cyber Security Centre, “Acquiring, managing, and disposing of network devices,” 2016. [Online]. Available: www.ncsc.gov.uk/guidance/acquiring-managing-and-disposing-network-devices. [Accessed 24 6 2020].

[43] Cabinet Office, “Minimum Cyber Security Standard,” 2018. [Online]. Available: www.gov.uk/government/publications/the-minimum-cyber-security-standard. [Accessed 24 June 2020].

[44] International Organization for Standardization, “BS ISO/IEC 27001:2013 Information technology – Security techniques – Information security management systems – Requirements”.

[45] International Organization for Standardization, “BS ISO/IEC 27002:2013, Information technology – Security techniques – Code of practice for information security management”.

[46] Cabinet Office, “Minimum Cyber Security Standard,” [Online]. Available: www.gov.uk/government/publications/the-minimum-cyber-security-standard. [Accessed 17 11 2020].

[47] The National Cyber Security Centre,, “10 Steps to cyber security,” 2018. [Online]. Available: www.ncsc.gov.uk/collection/10-steps-to-cyber-security/the-10-steps. [Accessed 24 6 2020].

[48] The National Cyber Security Centre, “Password administration for system owners,” 2018. [Online]. Available: www.ncsc.gov.uk/collection/passwords/updating-your-approach. [Accessed 24 6 2020].

[49] The National Cyber Security Centre, “Three random words or #thinkrandom,” 2016. [Online]. Available: www.ncsc.gov.uk/blog-post/three-random-words-or-thinkrandom-0. [Accessed 24 6 2020].

[50] The National Cyber Security Centre, “Password manager buyers guide,” 2018. [Online]. Available: www.ncsc.gov.uk/collection/passwords/password-manager-buyers-guide. [Accessed 24 6 2020].

[51] The National Cyber Security Centre, “Passwords, passwords everywhere,” 2019. [Online]. Available: www.ncsc.gov.uk/blog-post/passwords-passwords-everywhere. [Accessed 24 6 2020].

[52] The National Cyber Security Centre, “Using TLS to protect data 2017,” 2017. [Online]. Available: www.ncsc.gov.uk/guidance/tls-external-facing-services. [Accessed 24 6 2020].

[53] The National Cyber Security Centre, “Using IPSec protect data,” 2016. [Online]. Available: www.ncsc.gov.uk/guidance/using-ipsec-protect-data. [Accessed 24 6 2020].

[54] The National Cyber Security Centre, “The National Cyber Security Centre,” 30 April 2020. [Online]. Available: www.ncsc.gov.uk/blog-post/terminology-its-not-black-and-white. [Accessed 30 6 2020].

[55] The National Cyber Security Centre, “End user device (EUD) security guidance,” 2018. [Online]. Available: www.ncsc.gov.uk/collection/end-user-device-security/eud-overview/eud-security-principles. [Accessed 24 6 2020].

[56] The National Cyber Security Centre, “Mitigation malware,” 2018. [Online]. Available: www.ncsc.gov.uk/guidance/mitigating-malware. [Accessed 24 6 2020].

[57] The National Cyber Security Centre, “Phishing attacks: defending your organisation,” 2018. [Online]. Available: www.ncsc.gov.uk/guidance/phishing. [Accessed 24 6 2020].

[58] The National Cyber Security Centre, “Products & Services,” 2020. [Online]. Available: www.ncsc.gov.uk/section/products-services/all-products-services-categories?&start=0&rows=20. [Accessed 24 6 2020].

[59] The National Cyber Security Centre, “Small Business Guide: Response and Recovery,” 2019. [Online]. Available: www.ncsc.gov.uk/collection/small-business-guidance--response-and-recovery. [Accessed 24 6 2020].

[60] The National Cyber Security Centre, “Preventing lateral movement,” 2018. [Online]. Available: www.ncsc.gov.uk/guidance/preventing-lateral-movement. [Accessed 24 6 2020].

[61] The Australian Cyber Security Centre, “Implementing Network Segmentation and Segregation,” 2019. [Online]. Available: www.cyber.gov.au/publications/implementing-network-segmentation-and-segregation. [Accessed 24 6 2020].

[62] The National Cyber Security Centre, “Offline backups in an online world,” 2019. [Online]. Available: www.ncsc.gov.uk/blog-post/offline-backups-in-an-online-world. [Accessed 24 6 2020].

[63] The National Cyber Security Centre, “Mitigation malware and ransomware attacks,” 2020. [Online]. Available: www.ncsc.gov.uk/guidance/mitigating-malware-and-ransomware-attacks. [Accessed 24 6 2020].

[64] The National Cyber Security Centre, “Cloud Security Guidance Implementing the Cloud Security Principles,” 2018. [Online]. Available: www.ncsc.gov.uk/collection/cloud-security/implementing-the-cloud-security-principles. [Accessed 24 6 2020].

[65] The National Cyber Security Centre, “Incident Management,” 2019. [Online]. Available: www.ncsc.gov.uk/collection/incident-management. [Accessed 24 6 2020].

[66] The National Cyber Security Centre, “Introduction to logging for security purposes,” 2018. [Online]. Available: www.ncsc.gov.uk/guidance/introduction-logging-security-purposes. [Accessed 24 6 2020].

[67] The National Cyber Security Centre, “Logging made easy (LME),” 2019. [Online]. Available: www.ncsc.gov.uk/blog-post/logging-made-easy. [Accessed 24 June 2020].

[68] “Human Tissue Act 2004,” [Online]. Available: www.legislation.gov.uk/ukpga/2004/30/contents. [Accessed 10 09 2021].

[69] International Organization for Standardization, “ISO/IEC 17043:2010, Conformity assessment — General requirements for proficiency testing”.

[70] Eurachem, “Selection, Use and Interpretation of Proficiency Testing (PT) Schemes by Laboratories,” 2021. [Online]. Available: www.eurachem.org/index.php/publications/guides/usingpt. [Accessed 2021 11 24].

[71] United Kingdom Accreditation Service, “UKAS Policy on Participation in Proficiency Testing,” [Online]. Available: www.ukas.com/download/publications/Technical%20Policy%20Statements/TPS-47-Participation-in-PT-Edition-4-February-2020.pdf. [Accessed 17 11 2020].

[72] Forensic Science Regulator, “FSR-G-200, Expert Report Guidance,” [Online]. Available: www.gov.uk/government/collections/fsr-legal-guidance. [Accessed 17 11 2020].

[73] Forensic Science Regulator, “FSR-G-225, Non-Expert Technical Statement Guidance,” [Online]. Available: www.gov.uk/government/collections/fsr-legal-guidance. [Accessed 17 11 2020].

[74] Forensic Capability Network, “Streamlined Forensic Reporting (SFR),” [Online]. Available: www.fcn.police.uk/services/science/streamlined-forensic-reporting-sfr. [Accessed 12 09 2021].

[75] “Road Traffic Offenders Act 1988,” [Online]. Available: www.legislation.gov.uk/ukpga/1988/53/contents. [Accessed 11 09 2021].

[76] United Kingdom Accreditation Service, “UKAS LAB 13 Guidance on the Application of ISO/IEC 17025 Dealing with Expressions of Opinions and Interpretations,” [Online]. Available: www.ukas.com/download/publications/publications-relating-to-laboratory-accreditation/LAB-13-Edition-3-April-2019.pdf. [Accessed 17 11 2020].

[77] “Data Protection Act 2018,” [Online]. Available: www.legislation.gov.uk/ukpga/2018/12/contents. [Accessed 11 09 2021].

[78] “Police and Criminal Evidence Act 1984,” [Online]. Available: www.legislation.gov.uk/ukpga/1984/60/contents. [Accessed 11 09 2021].

[79] “Protection of Freedoms Act 2021,” [Online]. Available: www.legislation.gov.uk/ukpga/2012/9/contents. [Accessed 11 09 2021].

[80] “The Accreditation of Forensic Service Providers Regulations 2018,” [Online]. Available: www.legislation.gov.uk/uksi/2018/1276/contents. [Accessed 05 09 2021].

[81] United Kingdom Accreditation Service, “Publications relating to accreditation of Laboratories,” [Online]. Available: www.ukas.com/technical-services/publications/publications-relating-to-laboratories/. [Accessed 17 11 2020].

[82] “The Good Laboratory Practice Regulations 1999,” [Online]. Available: www.legislation.gov.uk/uksi/1999/3106/contents. [Accessed 12 09 2021].

[83] Medicines and Healthcare Products Regulatory Agency, “Good manufacturing practice and good distribution practice,” [Online]. Available:

www.gov.uk/guidance/good-manufacturing-practice-and-good-distribution-practice. [Accessed 17 11 2020].

[84] Criminal Procedure Rule Committee, “Criminal Procedure Rules 2020,” 2020. [Online]. Available: www.gov.uk/guidance/rules-and-practice-directions-2020. [Accessed 17 11 2020].

[85] Home Office, “Circular 12/2012: The testing of substances suspected to be drugs controlled under the Misuse of Drugs Act 1971”.

[86] “Misuse of Drugs Act 1971,” [Online]. Available: www.legislation.gov.uk/ukpga/1971/38/contents. [Accessed 12 12 2021].

[87] Crown Prosecution Service, “Forensic Science: Core Foundation Principles for Forensic Science Providers,” [Online]. Available: www.cps.gov.uk/legal-guidance/forensic-science-core-foundation-principles-forensic-science-providers. [Accessed 17 11 2020].

[88] International Laboratory Accreditation Cooperation, “ILAC G27:07/2019 Guidance on measurements performed as part of an inspection process,” [Online]. Available: https://ilac.org/publications-and-resources/ilac-guidance-series/. [Accessed 17 11 2020].

[89] The National Cyber Security Centre, “Setting up two-factor authentication (2FA),” [Online]. Available: www.ncsc.gov.uk/guidance/setting-two-factor-authentication-2fa. [Accessed 17 11 2020].

[90] European Proficiency Testing Information System , “About EPTIS,” [Online]. Available: www.eptis.bam.de/en/index.htm. [Accessed 17 11 2020].

[91] European Network of Forensic Science Institutes, “Welcome to ENFSI!,” [Online]. Available: https://enfsi.eu/. [Accessed 17 11 2020].

[92] United Kingdom Accreditation Service, “Find Accredited Organisations: Proficiency Testing Providers (PTP),” [Online]. Available: www.ukas.com/browse-accredited-organisations/?org_type=13. [Accessed 17 11 2020].

[93] Legal Aid Agency, “Guidance on forensic science laboratory charges in criminal matters,” [Online]. Available: www.gov.uk/guidance/expert-witnesses-in-legal-aid-cases#forensic-science-laboratory-charges-in-criminal-matters. [Accessed 17 11 2020].

[94] Home Office, “Circular 125/1976: Handling and disposal of saliva samples”.

[95] Home Office, “Circular 25/1987: I. Agreement for the use of the Police National Computer, II. Disposal of body samples”.

[96] Home Office, “Circular 40/1973: Handling and disposal of blood samples in criminal cases (other than those brought under the Road Traffic Act 1972)”.

[97] Home Office, “Circular 41/1973: Handling and disposal of blood samples”.

[98] Home Office, “Circular 74/1982: Disposal of blood samples, saliva samples and swabs stained with body fluid: handling of exhibits”.

[99] “Criminal Procedure and Investigations Act 1996,” [Online]. Available: www.legislation.gov.uk/ukpga/1996/25/contents. [Accessed 05 09 2021].

[100] “Human Tissue (Scotland) Act 2006,” [Online]. Available: www.legislation.gov.uk/asp/2006/4/contents. [Accessed 11 09 2021].

[101] “Criminal Justice and Licensing (Scotland) Act 2010,” [Online]. Available: www.legislation.gov.uk/asp/2010/13/contents. [Accessed 11 09 2021].

[102] “The Accreditation of Forensic Service Providers (Amendment) Regulations 2019,” [Online]. Available: www.legislation.gov.uk/uksi/2019/1384/contents/made. [Accessed 11 09 2021].

[103] “European Union (Future Relationship) Act 2020,” [Online]. Available: www.legislation.gov.uk/ukpga/2020/29/contents. [Accessed 11 09 2021].

[104] “The Criminal Justice Act 1967,” [Online]. Available: www.legislation.gov.uk/ukpga/1967/80/contents. [Accessed 11 09 2021].

[105] “Contempt of Court Act 1981,” [Online]. Available: www.legislation.gov.uk/ukpga/1981/49/contents. [Accessed 12 09 2021].

[106] British Standards Institution, “Publicly Available Specification (PAS) 377:2012 Specification for consumables used in the collection, preservation and processing of material for forensic analysis - Requirements for product, manufacturing and forensic kit assembly,” 2012.

[107] House of Commons, “Official Report - 5 February 2020,” [Online]. Available: https://hansard.parliament.uk/commons/2020-02-05. [Accessed 12 09 2021].

[108] House of Commons, “Official Report - 25 September 2020,” [Online]. Available: https://hansard.parliament.uk/commons/2020-09-25. [Accessed 12 09 2021].

[109] House of Commons, “Official Report - 11 November 2020,” [Online]. Available: https://hansard.parliament.uk/commons/2020-11-11#undefined. [Accessed 12 09 2021].

[110] House of Commons, “Official Report - 12 March 2021,” [Online]. Available: https://hansard.parliament.uk/commons/2021-03-12. [Accessed 12 09 2021].

[111] House of Commons, “Official Report - 10 November 2020,” [Online]. Available: https://hansard.parliament.uk/commons/2020-11-10. [Accessed 12 09 2021].

[112] House of Lords, “Official Report - 12 March 2021,” [Online]. Available: https://hansard.parliament.uk/lords/2021-03-12. [Accessed 12 09 2021].

[113] House of Lords, “Official Report - 19 March 2021,” [Online]. Available: https://hansard.parliament.uk/lords/2021-03-19. [Accessed 12 09 2021].

[114] House of Lords, “Official Report - 15 April 2021,” [Online]. Available: https://hansard.parliament.uk/lords/2021-04-15. [Accessed 12 09 2021].

[115] House of Lords, “Official Report - 22 April 2021,” [Online]. Available: https://hansard.parliament.uk/lords/2021-04-22. [Accessed 12 09 2021].

[116] “United Kingdom Security Vetting,” [Online]. Available: www.gov.uk/government/organisations/united-kingdom-security-vetting. [Accessed 13 09 2021].

[117] Warwickshire Police, “Vettting Process,” [Online]. Available: www.warwickshire.police.uk/police-forces/warwickshire-police/areas/warwickshire-police/about-us/about-us/national-contractors-vetting-scheme/vetting-process/. [Accessed 13 09 2021].

[118] EuraChem, “Quantifying Uncertainty in Analytical Measurement, 3rd Edition (2012),” [Online]. Available: www.eurachem.org/index.php/publications/guides/quam. [Accessed 24 09 2021].

[119] International Organization for Standardization, “BS EN ISO 9001:2015, Quality management systems. Requirements”.

[120] International Organization for Standardization, “BS ISO 18385:2016 Minimising the risk of human DNA contamination in products used to collect, store and analyse biological material for forensic purposes - Requirements”.

[121] International Organization for Standardization, “ISO 12653-1, Electronic imaging — Test target for the black-and-white scanning of office documents — Part 1: Characteristics”.

[122] International Organization for Standardization, “ISO 22313:2020, Security and resilience — Business continuity management systems — Guidance on the use of ISO 22301”.

[123] British Standards Institution, “BS 10008:2014, Evidential weight and legal admissibility of electronic information. Specification”.

[124] International Organization for Standardization, “ISO 22301:2019 Security and resilience — Business continuity management systems — Requirements”.

[125] Crown Prosecution Service, “Expert Evidence,” [Online]. Available: www.cps.gov.uk/legal-guidance/expert-evidence. [Accessed 27 10 2021].

[126] UKAS, “Guidance on the Application of ISO/IEC 17025:2017 Dealing with Expressions of Opinions and Interpretations,” LAB 13. [Online]. Available: https://www.ukas.com/wp-content/uploads/filebase/publications/publications-relating-to-laboratory-accreditation/LAB-13-Edition-3-April-2019.pdf.

[127] International Organization for Standardization, “BS EN ISO 9001:2015; Quality management systems. Requirements”.

[128] “Local Government Act 1972,” [Online]. Available: www.legislation.gov.uk/ukpga/1972/70/contents. [Accessed 05 02 2022].

[129] C. Tapper, Cross & Tapper on Evidence, 12th Edition, Oxford University Press, 2010.

43. Acronyms and Abbreviations

Abbreviation	Meaning
2FA	Two Factor Authentication
2G	Second Generation
3G	Third Generation
ACE	Analysis, Comparison and Evaluation
ACE-VR	Analyse, Compare, Evaluate, Verify and Report
ACPO	Association of Chief Police Officers, replaced by the National Police Chiefs’ Council (NPCC)
AFIS	Automated Fingerprint Identification System
ANSI	American National Standards Institute
ASCII	The American Standard Code for Information Interchange
AT	Analytical Threshold
BPA	Bloodstain Pattern Analysis
BS	British Standard
BY40	Basic Yellow 40
CNA	Cyanoacrylate
CCTV	Closed-Circuit Television
CED	Central Elimination Database
CJS	Criminal Justice System
CPS	Crown Prosecution Service
CRO	Criminal Records Office
CW	Crisis Worker
DC	District of Columbia
DFO	1, 8-Diazafluoren-9-one
DIS	
DNA	Deoxyribonucleic Acid
Dstl	Defence Science and Technology Laboratory
DVR	
ECA	
EDIT	Evidential Drug Identification Testing
EEK	Early Evidence Kit
EFS	Extended Feature Set for mark up of friction ridge data
EM	Electro-Magnetic
EM	Environmental Monitoring
EMS	Environmental Monitoring Sampling
EN	European Norm
ENFSI	European Network of Forensic Science Institutes
EPTIS	European Proficiency Testing Information System
EU	European Union
EWCA	England and Wales Court of Appeal
EUD	End User Device
EWHC	High Court of England and Wales
FBI	Federal Bureau of Investigation
FDR	Firearm Discharge Residue
FEL	Fingerprint Enhancement Laboratory

Abbreviation	Meaning
FFLM	Faculty of Forensic and Legal Medicine
FQSSG	Fingerprint Quality Standard Specialist Group
FSA	Forensic Science Activity
FSR	Forensic Science Regulator
FSRA	Forensic Science Regulator Act 2021
GLP	Good Laboratory Practice Regulations 1999
GMC	General Medical Council
GMP	Good Manufacturing Practice
GPS	Global Positioning System
HDD	Hard Disk Drive
HDTV	High-Definition Television
HM	Mer Majesty’s
HOC	Home Office Circular
HTML	
ICE	Infrequently Commissioned Expert
IEC	International Electrotechnical Commission
ILAC	International Laboratory Accreditation Cooperation
ILC	Inter-Laboratory Comparison
IPSec	Internet Protocol Security
ISO	International Organization for Standardisation
IT	Information Technology
LME	Logging Made Easy
lppm	Line pairs per millimetre
MP	Member of Parliament
NCSC	National Cyber Security Centre
NIST	National Institute of Standards and Technology
NPCC	National Police Chiefs’ Council
NPPV	Non-Police Personnel Vetting
NTSC	National Television System Committee standards
OIC	Officer in Charge
PAL	Phase Alternating Line standards
PAS	Publicly Available Specification
PCR	Polymerase Chain Reaction
PDF	
PEDB	Police Elimination Database
ppcm	Pixels Per Centimetre
PPE	Personal Protective Equipment
ppi	Pixels per inch
PT	Proficiency Test
PTP	Proficiency Testing Providers
QC	Quality Control
QMS	Quality Management System
QQ	Quantitative–Qualitative Threshold
R	Regina
RCPCH	Royal College of Paediatrics and Child Health
RF	Radio Frequency

Abbreviation	Meaning
SASR	South Australian State Reports
SC	Security Check
SFR	Streamlined Forensic Report
SI	International System of Units
SLA	Service Level Agreement
SOP	Standard Operating Procedure
SPR	Small Particle Reagent
STR	Short Tandem Repeat
SWGDAM	Scientific Working Group on DNA Analysis Method
SWGDE	Scientific Working Group on Digital Evidence
SWGFAST	Scientific Working Group on Friction Ridge Analysis Study and Technology
TLS	Transport Layer Security
UK	United Kingdom of Great Britain and Northern Ireland
UKAS	United Kingdom Accreditation Service
UKHL	United Kingdom House of Lords
UKSC	United Kingdom Supreme Court
USA	United States of America
VMD	Vacuum Metal Deposition
VRN	Vehicle Registration Number
WLR	Weekly Law Reports
WPA2	Wi-Fi Protected Access 2
WPA3	Wi-Fi Protected Access 3

44. Glossary

UNDER DEVELOPMENT

45. Correlation with Key Clauses in the Normative References [150]

UNDER DEVELOPMENT

[150] Cross references some of the key clauses that appear in the normative references, clauses in other documents may also be relevant (e.g. ILAC-P15) [17].

Part G – Appendices

G# – Transitional Provisions

46. Transitional Provisions

Under Development

G# - Infrequently Commissioned Experts

47. Infrequently Commissioned Experts

47.1 Scope

47.1.1 It is recognised that experts from outside the forensic science profession will be called to give evidence, in relation to an FSA, from time to time. These shall be referred to as Infrequently Commissioned Experts (ICE). Where ICE provide advice/evidence in relation to an FSA which is subject to this Code it is impractical to require (a) compliance with all provisions of this Code or (b) compliance with the means of demonstrating compliance (e.g. accreditation).

47.1.2 An individual shall only fall within the definition of an ICE if the conditions in section 47.1.3 are met in relation to both the practitioner and the evidence provided.

47.1.3 The practitioner, subject to the provisions of section 47.1.4, shall:

a. Not be a member of staff of a forensic unit providing services to the CJS in England and Wales;

b. Not represent themselves as a forensic scientist operating within the CJS in England and Wales; and

c. Not have been involved, in an advisory or expert capacity, in any case in the CJS in England and Wales in the previous 12 months.

47.1.4 Provision of evidence to a different justice system (e.g. Family Justice System) is not deemed to contribute to the frequency with which a person has any involvement in the CJS and so does not have bearing on the status of ICE.

47.1.5 The evidence provided by an ICE shall not be of a type which can routinely be obtained from a forensic unit.

47.2 Requirements

47.2.1 ICE shall comply with the following requirements.

a. The general obligations of expert witnesses [21] including the requirements of the Criminal Justice System as contained in the Criminal Procedure Rules [84] (and Criminal Practice Directions V, in particular 19A.5 and 19B [27]).

b. The requirements for contents of reports [151], including but not limited to, those prescribed in the Criminal Procedure Rules 19.4 [35] and Criminal Practice Directions V 19B [27].

c. Retention, recording, revelation and disclosure obligations.

d. The requirements pertaining to the use of reference collections and databases should they rely on them.

e. The requirement to use validated methods or procedures based on sound scientific principles and methodology.

f. The need to demonstrate competence in using these methods or procedures, and evaluating the results obtained objectively and impartially, and according to established scientific and statistical methodology.

g. The need to consider the impact that confirmation/cognitive bias can have at different stages and use appropriate avoidance strategies.

h. The declaration required in the Criminal Practice Directions V 19B [27] and the Regulator’s requirement for the positive declaration to be in the following terms: [152]

> “I confirm that, to the best of my knowledge and belief, I have acted in accordance with the Code of Practice published by the Forensic Science Regulator [insert issue] as it pertains to experts from other professions. Annex [x] details the steps taken to comply with the specific requirements set for experts from other professions.”

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151 A statement is one form of a report. It is formatted to comply with the provisions of s9 Criminal Justice Act 1967 [107].

152 Experts will need to produce a different declaration if there are other non-compliances, whether inability to comply with specific clauses in the Standards of Conduct, or that accreditation is required.

G#- FSA Definitions – General Provisions

48. Purpose

48.1.1 To avoid considerable repetition in the definitions of FSAs, in the FSA specific appendices below, this section addresses conditions which apply generally and provisions which apply generally.

49. General Requirements

49.1 Purpose

49.1.1 The definitions of FSAs will only apply to the extent that the activity is undertaken for a purpose specified in s11(2) of the 2021 Act [10]. To achieve this requirement the following general requirements will apply to all FSA definitions.

49.2 Commissioning – Detection and/or Investigation of Crime

49.2.1 To fall within the purpose in s11(2)(a) 2021 Act [10] the following conditions apply.

49.2.2 The activity must have been commissioned by, or undertaken by (or on behalf of), one of the following persons with the aim that the output should be used for a purpose related to the detection and/or investigation of crime.

a. A law enforcement agency.

b. A prosecuting authority.

c. A suspect, accused or convicted person (in relation to the offence for which they are suspected, accused or convicted) where the relevant criminal investigation and/or prosecution was by a body listed in the sub-clauses above.

d. A legal representative of a person within the description in section c above.

e. A body with legal authority to investigate potential miscarriages of justice.

f. The Forensic Science Regulator.

49.2.3 The detection and/or investigation of crime means. [153]

a. Establishing whether a crime has occurred, has been attempted or is planned.

b. Establishing whether information related to the investigation of crime is accurate and eliminating the innocent from criminal investigations.

c. Establishing by whom, for what purpose, by what means and generally in what circumstances any crime was, or may have been, committed.

d. Obtaining and recording such information as may be needed in the criminal investigation and prosecution of any offence.

e. The apprehension of the person by whom any crime was committed.

49.2.4 Law enforcement agency means any of the following bodies.

a. The forty-three territorial police forces in England and Wales.

b. The limited territorial forces listed below.

i. Kew Constabulary.

ii. Mersey Tunnels Police.

iii. Port of Bristol Police.

iv. Port of Dover Police.

v. Port of Felixstowe Police.

vi. Port of Liverpool Police.

vii. Port of Tilbury Police.

viii. Tees and Hartlepool Harbour Police.

c. The non-territorial police forces listed below (in relation to their work in England and Wales).

i. British Transport Police.

ii. Civil Nuclear Constabulary.

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153 The text is based on s39 Human Tissue Act 2004 [69]

iii. Ministry of Defence Police.

d. The military law enforcement bodies set out below (in relation to their work in England and Wales).

i. Royal Air Force Police.

ii. Royal Marines Police.

iii. Royal Military Police.

iv. Royal Naval Police.

e. The National Crime Agency (in relation to its work in England and Wales).

f. The Serious Fraud Office.

g. HM Revenue and Customs (in relation to its work in England and Wales).

h. The Home Office (in relation to its work in England and Wales).

i. The Independent Office for Police Conduct.

j. The security and intelligence agencies listed below (in relation to their work in England and Wales).

i. The Government Communications Headquarters.

ii. The Secret Intelligence Service.

iii. The Security Service.

k. Any person responsible for or operating a national forensic database for the purposes of that database. The term national forensic database means any of the following.

i. The National DNA Database. [154]

ii. The National Forensic Footwear Database. [155]

iii. The National Ballistics Intelligence Service. [156]

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154 Overseen by Home Office Forensic Information Database Service.

155 Overseen by Home Office Forensic Information Database Service.

156 This is known as NaBIS.

iv. The National Fingerprints Database. [157]

49.2.5 A prosecuting authority means:

a. HM Attorney General;

b. The Director of Public Prosecutions;

c. The Crown Prosecution Service; and

d. The Serious Fraud Office.

49.3 Commissioning - Preparation, Analysis or Presentation of Evidence

49.3.1 To fall within the purpose in s11(2)(b) 2021 Act [10] the following conditions apply.

49.3.2 The activity must have been commissioned by one of the following persons/bodies with the aim that the output should be used for the with the intention that the output is used for a purpose related to criminal proceedings.

a. A law enforcement agency.

b. A prosecuting authority.

c. A suspect, accused or convicted person (in relation to the offence for which they are suspected, accused or convicted) where the relevant criminal investigation and/or prosecution was by a body listed in the sub-clauses above.

d. A legal representative of a person within the description in section c above.

e. A body with legal authority to investigate potential miscarriages of justice.

f. The Forensic Science Regulator.

49.3.3 The term criminal proceedings means, subject to sections 49.3.4 and 49.3.5, any proceeding covered by the following provisions.

a. Section 51 of the Criminal Justice Act 2003.

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[157] Overseen by Home Office Forensic Information Database Service.

b. Section 14 of the Legal Aid, Sentencing and Punishment of Offenders Act 2012.

49.3.4 The following proceedings shall not be considered ‘criminal proceedings’ for the purpose of this Code.

a. Proceedings for dealing with an individual under the Extradition Act 2003.

b. Proceedings for binding an individual over to keep the peace or to be of good behaviour under section 115 of the Magistrates' Courts Act 1980 and for dealing with an individual who fails to comply with an order under that section.

c. Proceedings for contempt committed, or alleged to have been committed, by an individual in the face of a court.

d. Proceedings before the Judicial Committee of the Privy Council.

49.3.5 The term ‘criminal proceedings’ shall not cover any activities related to the imposition or management of a sentence imposed on a convicted person.

49.3.6 Where any activity is commissioned for purposes other than those described in s11 2021 Act (and therefore falling within he provisions set out above) generates material which is subsequently of relevance to the CJS the initial work is not an FSA. Any work (e.g. any additional work, the production of reports or the presentation of evidence) commissioned for CJS use will be an FSA if it falls within the definitions in this Code.

49.4 Modification of Scope

49.4.1 The requirements stated above limit the scope of FSA to a subset of what the 2021 Act [10] states are FSA. The Regulator has determined that at the point of introduction of this Code this is appropriate but future versions of the Code may revise the requirements above and, as a consequence, extend the scope of the FSA.

50. Contingency Capacity/Facility

50.1.1 This section applies where a forensic unit establishes a facility, or capability, which is

a. Only to be used in the event of a potential future event;

b. Not performing any casework which would amount to an FSA; and

c. The work which would be undertaken, if the capacity/facility was brought into use, would amount to an FSA.

50.1.2 In these cases, the preparation and maintenance of the capacity/facility will itself be considered to be carrying on the FSA relevant to the work to be undertaken in the facility/capacity.

51. General Inclusions

51.1 General Activities

51.1.1 In all FSA definitions below, the following activities shall be assumed to be part of the definition unless the contrary is clearly stated in the definition.

a. The following aspects of the handling and continuity monitoring of any item/exhibit or material relevant to the activities listed in the section.

i. The packaging.

ii. The labelling.

iii. The transportation (covering all transportation from the point the item/exhibit is seized until it is returned to the owner or disposed of).

iv. The storage.

v. The security and continuity.

vi. The destruction.

b. The provisions set out in clause a shall also apply to any item/exhibit, material or information taken from, created from or derived from any item/exhibit or material relevant to the criminal investigation.

c. The provision of any advice, to a person or body listed in section 49 related to the use, potential use or the potential benefits of the activities set out in the definition to the criminal investigation of a specific matter.

d. In relation to the activities set out in the definition any of the following aspects of assessment, interpretation and/or reporting.

i. The case assessment process.

ii. The determination of the examination strategy.

iii. The interpretation of the findings to assess/determine the significance to the criminal investigation.

iv. The reporting of the results of any activities and any assessment of interpretation to the commissioning party of the Criminal Justice System.

v. The provision of evidence (whether evidence of fact or opinion) in relation to the activities (whether the activities were undertaken by or on behalf of the person providing the evidence).

vi. The provision of evidence of opinion as to the significance of the findings produced by the activities in the context of the case.

vii. The provision of any expert advice or evidence in relation to any activities listed in sections i to vi above.

e. The critical findings check.

f. The primary case review.

51.1.2 The forensic unit, in undertaking any FSA, may need to consider whether other evidence types may be of value, assess the prioritisation of such evidence types and the impact of any examination on other evidence types. This shall be considered part of the examination strategy in section 51.1.1 .

51.2 Supporting Activities

51.2.1 All work necessary to provide, or support the provision of, the FSA listed in each definition form part of that FSA and are subject to the applicable standards.

51.2.2 The activities which are necessary for, or support the provision of, the FSA covered in the definition include, but are not limited to, the following.

a. Ensuring all work is undertaken in a suitable environment.

i. That the accommodation is constructed and maintained in an appropriate way.

ii. That cleanliness is maintained at a level suitable for the work undertaken.

iii. That appropriate anti-contamination processes are employed.

iv. That, where relevant, suitable environmental monitoring is undertaken.

v. The appropriate security is maintained.

b. Ensuring all equipment employed is fit for purpose.

i. That suitable equipment is procured.

ii. That all equipment is subject to appropriate maintenance at pre-determined intervals.

iii. That all equipment is suitably calibrated.

c. That appropriate provisions are in place in relation to the following.

i. The physical security of the accommodation.

ii. The security of all IT systems.

iii. The security of information.

iv. The integrity and security clearance of personnel.

d. Ensuring that all methods employed have been appropriately validated for use.

e. Ensuring all persons undertaking work are competent.

i. That all persons undertaking work have sufficient training, qualifications and experience and have satisfactorily demonstrated that they are able to carry out the work proficiently.

ii. That the ability of all persons to carry out the work to the relevant standards (i.e. proficiently) is maintained and regularly assessed.

f. Ensuring all reagents and consumables are fit for the purpose for which they are being used.

g. That all collections of information or material (e.g. reference databases) used to assist in the examination, analysis of items/exhibits or the assessment/interpretation of results are fit for purpose.

52. General Exclusions

52.1 Knowledge

52.1.1 The forensic unit commissioned to perform the activity must, at the time the work is commissioned, be aware that the output was to be used for a purpose in s11 of the 2021 Act [10].

52.2 Use of Animals

52.2.1 Any method which is based on the use of non-human animals (e.g. dogs) shall not be considered to form any part of an FSA.

52.3 Secretary of State Approval

Type Approval

52.3.1 Where any statute provides the Secretary of State the power to approve any item, or method, for use in circumstances which might fall within the scope of s11 2021 Act. [10] The following shall not be part of any FSA.

a. The process by which the Secretary of State determines whether to grant approval.

b. The process by which the Secretary of State determines whether to continue, suspend or withdraw an existing approval.

c. Any work undertaken by, on behalf of or commissioned by the Secretary of State to assist in the process of granting, suspending, continuing or withdrawing an approval.

Drug Testing Equipment

52.3.2 Home Office Circular 15/2012 [85] contains provisions about the testing of items/exhibits suspected of being drugs controlled under the Misuse of Drugs Act 1971 [86]. These provisions incorporate the use of kits approved by, or on behalf of, the Secretary of State. The following shall not be part of any FSA.

a. The process by which the Secretary of State, or persons acting on behalf of the Secretary of State, determines whether to grant approval.

b. The process by which the Secretary of State, or persons acting on behalf of the Secretary of State, determines whether to continue, suspend or withdraw an existing approval.

c. Any work undertaken by, on behalf of or commissioned by the Secretary of State (or persons acting on behalf of the Secretary of State) to assist in the process of granting, suspending, continuing or withdrawing an approval.

G# - FSAs – Definitions/Requirements

53. FSA Definition - Incident Scene Examination

53.1 Definition

53.1.1 The examination of an incident scene to discover, identify, and recover items, materials and information relevant to the occurrence of potential criminal activity, to aid the investigation of an alleged offence, that may subsequently be used as evidence.

53.1.2 This activity applies to a specialist who is commissioned to carry out a planned inspection of a scene and whose primary role is that.

53.1.3 The following activities, subject to the provisions below, shall be considered to constitute Incident Scene Examination.

53.2 Sub-Activities

a. Assessment of a request to attend and inspect an incident scene for the allocation of appropriate resource.

b. Scene control, management, setting of forensic strategy, and co-ordination at the incident including other related scene locations and attendance of specialists.

c. Recovery and recording of material in whatever form is necessary.

d. Interpretation of the scene

e. Provision of a report and testimony.

53.3 Note

53.3.1 The term ‘location’ means the following:

a. Any location which is believed to be a place where a criminal offence has occurred.

b. The location where a relevant item (e.g., a body) is found.

c. Any location where a relevant item is believed to be located (e.g., vehicle or physical item).

d. A location owned, occupied or under the control of any lay person of interest (e.g., complainant or suspected/accused person).

e. Any mortuary (or other location) where a post-mortem examination is undertaken.

53.4 Linked FSAs

53.4.1 The following FSAs are linked to this definition, but are defined separately

a. Examination of Vehicles Involved in Incidents [ref FSA]

b. Examination of Fire Scenes [ref]

c. Examination of Explosion Scenes [ref]

53.5 Included in Other FSAs

53.5.1 The following shall not fall within the definition of Incident Scene Examination, but are the subject of a different FSA definition:

a. Forensic medical examination – evidence recovery [ref Examination of complainants, detainees, deceased FSAs]

b. Activity carried out on an item recovered from a scene.

c. Activity subject to accreditation to ISO/IEC 17025 conducted as offsite testing.

53.6 Exclusions from this FSA and the Code

53.6.1 The following shall not fall within the definition of Incident Scene Examination, and will not fall under the Code:

a. Activity undertaken by police officer, member of the public or attending emergency service such as ambulance including taking steps to protect/preserve or collect items/material

b. Activity carried out on behalf of a coroner.

c. Any investigation related to determining the cause of an air or rail crash.

d. Any investigation related to determination of the cause of the sinking of a vessel (capable of travelling on, or under, the water) at sea or on inland waters.

53.7 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17020:2012 General criteria for the operation of various types of bodies performing inspection.

b. Accreditation to ISO/IEC 17020

c. Compliance with the Code

54. FSA Definition – Examination of Vehicles Involved in incidents

54.1 Definition

54.1.1 Determination of circumstances of an incident involving a motor vehicle (e.g. collision).

54.1.2 This activity applies to a specialist who is commissioned to carry out a planned inspection of a scene and whose primary role is that.

54.1.3 The following activities, subject to the provisions below, shall be considered to constitute Examination of vehicles involved in incidents.

54.2 Sub-Activities

a. The activities of a relevant person at a location related to an incident, as described below, on any public highway, or land adjacent to a public highway, with the aim of determining the events which led to the incident or which occurred following the incident.

i. Where a motor vehicle has crashed.

ii. Where a motor vehicle has come into contact with another motor vehicle, other vehicle (of any description), any person or animal.

iii. Where a motor vehicle has come into contact with any stationary object (other than one covered by section (b)).

b. Any examinations, analyses or calculations related to the activities described above.

54.3 Included in Other FSAs

54.3.1 The following shall not fall within the definition of Examination of vehicles involved in incidents, but are the subject of a different FSA definition:

a. Determination of drug(s) and/or noxious substances [ref]

b. Vehicle component analysis [ref]

54.4 Exclusions from this FSA and the Code

54.4.1 The following shall not fall within the definition of Examination to establish the origin, cause and development/spread of a fire., and will not fall under the Code:

a. Activity undertaken by police officer, member of the public or attending emergency service such as ambulance including taking steps to protect/preserve or collect items/material

b. Activity carried out on behalf of a coroner.

c. Any investigation related to determining the cause of an air or rail crash.

d. Any investigation related to determination of the cause of the sinking of a vessel (capable of travelling on, or under, the water) at sea or on inland waters.

54.5 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17020:2012 General criteria for the operation of various types of bodies performing inspection.

b. Accreditation to ISO/IEC 17020

c. Compliance with the Code

55. FSA Definition – Examination to Establish the Origin, Cause and Development/Spread of a Fire

55.1 Definition

55.1.1 Examination of a fire scene, usually to establish the origin and cause of a fire.

55.1.2 This activity applies to a specialist who is commissioned to carry out a planned inspection of a scene and whose primary role is that.

55.1.3 The following activities shall, subject to the provisions below, be considered to be Examination to establish the origin, cause and development/spread of a fire.

55.2 Sub-Activities

a. Assessment of a request for a person to attend a scene of a fire and the response to that request including any initial assessment of likely requirements and advice

b. The activities of any person at a relevant location with the aim of location, identification and/or recovery of items, or materials, which may be evidence, or which may give rise to evidence relating to cause and origin of the fire.

c. The activities of a person at any relevant location with the aim of determining the events which led to the incident or which occurred following the incident.

d. Any presumptive examinations, analyses or calculations related to the activities described above.

55.3 Note

55.3.1 In this section the term ‘relevant location’ means the following.

a. Any location which is a place where a fire has occurred.

b. Any location, not falling within the above, which is relevant to the investigation of a crime or suspected crime.

55.4 Exclusions from this FSA and the Code

55.4.1 The following shall not fall within the definition of Examination to establish the origin, cause and development/spread of a fire., and will not fall under the Code:

a. Activity undertaken by police officer, member of the public or attending emergency service such as ambulance including taking steps to protect/preserve or collect items/material

b. Activity carried out on behalf of a coroner.

c. Any investigation related to determining the cause of an air or rail crash.

d. Any investigation related to determination of the cause of the sinking of a vessel (capable of travelling on, or under, the water) at sea or on inland waters.

55.5 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17020:2012 General criteria for the operation of various types of bodies performing inspection.

b. Accreditation to ISO/IEC 17020

c. Compliance with the Code

56. FSA Definition – Examination to Establish the Origin and Cause of an Explosion

56.1 Definition

56.1.1 Examination of an explosion scene, usually to establish the origin and cause of an explosion.

56.1.2 This activity applies to a specialist who is commissioned to carry out a planned inspection of a scene and whose primary role is that.

56.1.3 The following activities shall, subject to the provisions below, be considered to be Examination to establish the origin and cause of an explosion

56.2 Sub-Activities

a. Assessment of a request for a person to attend a scene of an explosion and the response to that request including any initial assessment of likely requirements and advice

b. The activities of a person at a relevant location with the aim of location, identification and/or recovery of items, or materials, which may be evidence, or which may give rise to evidence relating to cause and origin of the explosion.

c. The activities of a person at any relevant location with the aim of determining the events which led to the incident or which occurred following the incident.

d. Any presumptive examinations, analyses or calculations related to the activities described above.

56.3 Note

56.3.1 In this section the term ‘relevant location’ means the following.

a. Any location which is a place where an explosion has occurred.

d. Any location, not falling within section (a), which is relevant to the investigation of a crime or suspected crime.

56.4 Exclusions from this FSA and the Code

56.4.1 The following shall not fall within the definition of Examination to establish the origin and cause of an explosion, and will not fall under the Code:

a. Activity undertaken by police officer, member of the public or attending emergency service such as ambulance including taking steps to protect/preserve or collect items/material

b. Activity carried out on behalf of a coroner.

c. Any investigation related to determining the cause of an air or rail crash.

d. Any investigation related to determination of the cause of the sinking of a vessel (capable of travelling on, or under, the water) at sea or on inland waters.

56.5 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17020:2012 General criteria for the operation of various types of bodies performing inspection.

b. Accreditation to ISO/IEC 17020

c. Compliance with the Code

57. FSA Definition – Forensic Examination of Complainants at Sexual Assault Referral Centres

57.1 Definition

57.1.1 Recovery of material for further testing believed to be relevant to an alleged offence committed against the complainant.

57.1.2 The following activities, subject to the provisions below, shall be considered to be Forensic examination of complainants at Sexual Assault Referral Centres.

57.2 Sub-Activities

a. The location, recovery and recording of material which may give rise to evidence in an alleged offence under investigation.

i. Recording of material may include the use of image capture devices (including colposcopes) for specialist image capture/photo-documentation in general and intimate images, and/or the use of body diagrams/maps to record the presence, location, and measurements of injuries and marks, or the absence of injuries and marks.

ii. Material believed to be evidence may be biological or non-biological.

b. The recovery and/or sampling of items or material

c. The assessment, location, identification, and recovery of materials for further analysis.

d. Archiving of material believed to be evidence and associated records.

57.3 Included in Other FSAs

57.3.1 The following shall not fall within the definition of Forensic examination of complainants at Sexual Assault Referral Centres, but are the subject of a different FSA definition:

a. Obtaining friction ridge detail [ref FRD FSAs]

57.4 Exclusions from this FSA and the Code

57.4.1 The following shall not fall within the definition of Forensic examination of complainants at Sexual Assault Referral Centres and will not fall under the Code:

a. An examination to determine whether someone is fit to be interviewed and/or examined.

b. Forensic pathology and post-mortem examinations.

c. The activities of a person, other than the practitioner (including police and complainant), who is taking steps to protect/preserve or collect evidence.

d. Clinical assessment and the provision of appropriate medical care, including treatment of injuries.

e. Non-police referrals.

f. Screening for sexually transmitted infections (STIs).

g. Taking dental impressions.

h. Assessment of injuries sustained by female genital mutilation (FGM)

i. Obtaining facial images

57.5 Accreditation, Certification, and/or Compliance Required

a. ISO/IEC 15189:2012 Medical laboratories – Requirements for quality and competence.

b. Compliance with Code required by 01 October 2023.

57.6 Other Parts of the Code that Relate to this FSA

a. Sexual Assault Examination: Requirements for Assessment, Collection and Recording of Forensic Science Related Evidence (C116).

58. FSA Definition – Forensic Examination of Detainees

58.1 Definition

58.1.1 Recovery of material for further testing believed to be relevant to an alleged involvement in an offence.

58.1.2 The following activities, subject to the provisions below, shall be considered to be Forensic examination of detainees.

58.2 Sub-Activities

a. The location, identification, and recording of material which may give rise to evidence.

i. Recording of evidence may include the use of image capture devices for specialist image capture/photo-documentation in general and intimate images, and/or the use of body diagrams/maps to record the

presence, location, and measurements of injuries and marks, or the absence of injuries and marks.

ii. Material believed to be evidence may be biological or non-biological.

b. The recovery and/or sampling of items or material which may give rise to evidence.

c. The assessment, location, identification, and recovery of materials for further analysis.

d. Archiving of material believed to be evidence and associated records.

58.3 Note

a. PACE Code C (‘Code of Practice for the Detention, Treatment, and Questioning of Persons by Police Officers’) provides considerations relating to the detention of juveniles, including the provision of an appropriate adult.

58.4 Included in Other FSAs

58.4.1 The following shall not fall within the definition of Forensic Examination of Detainees, but are the subject of a different FSA definition:

a. Obtaining friction ridge detail [ref FRD Visualisation and Imagining and FRD Comparison FSAs]

b. Obtaining footwear prints [Ref Footwear FSAs]

c. Marks [Marks: Comparison and Marks: Visualisation ref]

58.5 Exclusions from this FSA and the Code

58.5.1 The following shall not fall within the definition of Forensic examination of detainees and will not fall under the Code:

a. The examination to determine whether someone is fit to be interviewed and/or detained.

b. The activities of a person, other than the practitioner (including police), who is taking steps to protect/preserve or collect evidence.

c. The use of evidential intoximeters.

d. Screening for sexually transmitted infections (STIs).

e. Taking dental impressions.

f. Obtaining facial images

58.6 Accreditation, Certification, and/or Compliance Required

58.6.1 No requirements at this stage

59. FSA Definition – Forensic Examination of Deceased Individuals

59.1 Definition

59.1.1 Recovery of material for further testing believed to be relevant to the circumstances and/or identifying person(s) involved in the death of the individual.

59.1.2 The following activities, subject to the provisions below, shall be considered to be Forensic examination of a deceased individual.

59.2 Sub-Activities

a. The location, identification, and recording of material which may give rise to evidence.

i. Recording of evidence may include specialist image capture/photo-documentation in general and intimate images, the use of body diagrams/maps, mark casting, and/or the use of mobile biometric devices.

ii. Material believed to be evidence may be biological or non-biological.

b. The recovery and/or sampling of items or material

c. The assessment, location, identification, and recovery of materials for further analysis.

d. Archiving of material believed to be evidence and associated records.

e. The sub-activities listed above may occur at different locations and be prior to, during, and/or after a forensic post-mortem examination.

59.3 Included in Other FSAs

59.3.1 The following shall not fall within the definition of Forensic examination of deceased individuals, but are the subject of a different FSA definition:

a. Comparison of injuries to an instrument and/or weapon [ref Marks FSA]

b. Obtaining facial images and friction ridge detail (fingerprints) through conventional means.

c. Disaster Victim Identification processes.

59.4 Exclusions from this FSA and the Code

59.4.1 The following shall not fall within the definition of Forensic examination of deceased individuals and will not fall under the Code:

a. Post-mortem examinations to establish cause and/or time of death, including entomology and diatom analysis.

b. The activities of a person, other than the practitioner (including police), who is taking steps to protect/preserve or collect evidence.

c. HSE, AAIB, RAIB, and MAIB investigations.

d. Taking dental impressions.

59.5 Accreditation, Certification, and/or Compliance Required

59.5.1 No requirements at this stage

60. FSA Definition – Human Body Fluid and Biological Material Examination

60.1 Definition

60.1.1 The location, determination of human biological material and sampling for further testing.

60.1.2 The following activities, subject to the provisions below, shall be considered to constitute Human body fluid and biological material examination.

60.2 Sub-Activities

a. Visual screening and examination with the use of light sources of an appropriate wavelength and microscopic examination.

b. Sampling to recover human body fluid and biological material, which may be from people or from items.

c. The presumptive testing and microscopical examination of human body fluid and biological material.

d. Enhancement of non-visible staining such as blood.

e. Hair and body fluid identification using mitochondrial tests

f. Differentiation of human and animal hairs

60.3 Note

60.3.1 The sub-activities may apply to mixtures of more than one body fluid or biological material.

60.3.2 Human body fluid and biological material examination for criminal justice purposes is exempt from HTA Act, under the exemption set out in s39.

60.4 Included in Other FSAs

60.4.1 The following shall not fall within the definition of Human body fluid and biological material examination, but are the subject of a different FSA definition:

a. Human DNA Analysis [ref Human DNA Analysis FSA]

b. Body fluid distribution analysis [ref Blood pattern and human body fluid distribution analysis FSA]

c. Use of national databases for searching [ref Forensic Databases FSA]

d. Analysis of lubricants [ref Determination of non-particulates, including oils, greases, lubricants, and similar FSA]

e. Recovery of contact trace biological material, including fibre taping, for further examination at scenes [ref Incident scene examination FSA] [ref Recovery and determination of trace materials transferred by contact FSA]

f. Microscopical examination at scenes [ref Incident scene examination FSA]

60.5 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.

b. Accreditation to ISO/IEC 17025

c. Compliance with the Code

61. FSA Definition – Blood Pattern and Human Body Fluid Distribution Analysis

61.1 Definition

61.1.1 Reconstruction and interpretation of activity based on the pattern and/or distribution of blood or other body fluids in relation to an alleged criminal offence.

61.1.2 The following activities, subject to the provisions below, shall be considered to constitute Blood pattern and human body fluid distribution analysis.

61.2 Sub-Activities

a. Visual examination for human body fluids including blood, semen, faeces, and saliva.

i. Visualisation includes the use of light sources of an appropriate wavelength and/or chemical enhancement, especially of non-visible staining or presumptive testing.

b. The recording of material which may give rise to evidence, through specialist image capture (including 3D imaging and video), examination notes, and/or measurements.

c. Assessment of the form, morphology, and distribution or level of body fluid staining to provide opinion at the activity level.

d. Blood pattern analysis for reconstruction and to provide opinion at the activity level.

i. Includes blood pattern analysis from photographs or other media.

e. In this section, the sub-activities may apply to mixtures of more than one body fluid.

61.3 Included in Other FSAs

61.3.1 The following shall not fall within the definition of Blood pattern and human body fluid distribution analysis, but are the subject of a different FSA definition:

a. Human DNA Analysis [ref Human DNA Analysis FSA]

b. Human body fluid and biological material examination [ref Human Body fluid and biological material examination FSA]

c. Recovery of biological material, including fibre taping, for further examination at scenes [ref Incident scene examination FSA] [ref Recovery and determination of trace materials transferred by contact FSA]

d. Microscopical examination at scenes [ref Incident scene examination FSA].

e. Case Review [ref Case Review FSA]

61.4 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories (away from scene and/or extension to scope for scenes).

b. Accreditation to ISO/IEC 17025

c. Compliance with the Code

61.5 Other Parts of the Code which Apply to this FSA

a. Blood Pattern Analysis (C102) Code ### apply

62. FSA Definition – Human DNA Analysis

62.1 Definition

62.1.1 The use of DNA technologies applicable to human biological material sample types encountered in forensic casework to determine the potential source(s) of biological material.

62.1.2 The following activities, subject to the provisions below, shall be considered to constitute Human DNA Analysis.

62.2 Sub-Activities

a. The extraction, purification, and quantification of DNA, including the use of PCR and fragment separation by electrophoresis.

i. DNA quantification is not required for hairs and reference samples (including liquid blood and buccal swaps) from persons.

b. Sequencing of DNA and production of Autosomal DNA/Haplotype profiles

c. Profile interpretation, including designation and comparison for single source and DNA mixtures

d. Statistical evaluation up to and including the point of generating a likelihood ratio.

e. Quality assurance checks, including contamination, profile designation, and sample switch checks.

f. Submitting results to the relevant DNA databases

62.3 Note

62.3.1 DNA analysis for criminal justice purposes is exempt from the Human Tissue Act 2004 (HTA) under the exemption set out in s39.

62.4 Included in Other FSAs

62.4.1 The following shall not fall within the definition of Human DNA Analysis, but are the subject of a different FSA definition:

a. Use of national databases for searching [ref Forensic Databases FSA]

b. Body fluid identification using body fluid mRNA tests [ref Human Body fluid and biological material examination FSA]

c. Kinship Analysis [ref Human Kinship FSA]

d. Case Review [ref Case Review FSA]

e. Disaster Victim Identification for criminal casework [Ref Human Kinship FSA]

62.5 Exclusions from this FSA and the Code

62.5.1 The following shall not fall within the definition of Human DNA Analysis and will not fall under the Code:

a. Assessment of the mechanism of deposition, including issues relating to transfer, persistence, prevalence, and recovery

b. Genetic genealogy

62.6 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.

b. Accreditation to ISO/IEC 17025

c. Compliance with the Code

62.7 Other parts of the Code that relate to this FSA

a. DNA analysis (C108) Code ### apply

63. FSA Definition – Human Kinship Analysis

63.1 Definition

63.1.1 The use of outputs of DNA Analysis in accordance with the Human DNA Analysis FSA to determine the biological relationship (pedigree/lineage) from within a closed set of individuals.

63.1.2 The purpose of Human Kinship Analysis is to repatriate body parts, to identify individuals and determine and/ or confirm putative biological relationships.

63.1.3 The following activities, subject to the provisions below, shall be considered to constitute Human Kinship Analysis.

63.2 Sub-Activities

a. The selection of Autosomal, haplotype and/or mitochondrial technologies to conduct paternity and/or pedigree analysis.

b. Profile/sequence designation and comparison

c. Statistical evaluation, including the use of appropriate population reference data sets.

d. Quality assurance checks, including designation checks, pedigree build, reference data used and calculations.

e. Submitting results to the relevant DNA databases

f. Disaster Victim Identification relating to criminal and/or terrorist acts are covered by Human Kinship Analysis.

g. DNA analysis for criminal justice purposes is exempt from the Human Tissue Act 2004 (HTA) under the exemption set out in s39, therefore Human Kinship Analysis for criminal purposes is exempt from HTA.

63.3 Included in Other FSAs

63.3.1 The following shall not fall within the definition of Human Kinship Analysis, but are the subject of a different FSA definition:

a. Use of national databases for searching [ref Forensic Databases FSA]

b. Case Review [ref Case Review FSA]

c. Human DNA Analysis [ref]

63.4 Exclusions from this FSA and the Code

63.4.1 The following shall not fall within the definition of Human Kinship Analysis and will not fall under the Code:

a. Disaster victim identification for natural/ non-criminal mass disasters

63.5 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.

b. Accreditation to ISO/IEC 17025

c. Compliance with the Code

64. FSA Definition – Non-Human Biological Examination: Vertebrates

64.1 Definition

64.1.1 The determination of species and/or the potential source of animal (vertebrates) biological material.

64.1.2 The following activities, subject to the provisions below, shall be considered to constitute Non-Human Biological Examination: Vertebrates.

64.2 Sub-Activities

a. Morphological examination of relevant material.

   i. Relevant material refers to any part of a vertebrate, including hair, skin, teeth, bone, scales, feather, and processed products such as traditional medicines

b. Macroscopic, microscopic, and immunological tests for species identification

c. DNA analysis for species identification and pedigree analysis, including:

   i. Recovery of DNA.

   ii. The extraction and purification of DNA, including the use of PCR (dependent on the investigative question) and electrophoresis.

   iii. Processing of the PCR result, including sequencing and genotyping depending on the test applied.

   iv. The comparison, interpretation, including statistical evaluation, and reporting of the DNA analysis

64.3 Included in Other FSAs

64.3.1 The following shall not fall within the definition of Non-Human Biological Examination: Vertebrates, but are the subject of a different FSA definition:

a. Human DNA Analysis [ref FSA]

b. Case Review [ref Case Review FSA]

c. Non-Human Biological Examination: Plants and Microbes [ref FSA]

64.4 Exclusions from this FSA and the Code

64.4.1 The following shall not fall within the definition of Non-Human Biological Examination: Vertebrates, and will not fall under the Code:

a. Analysis to determine geographical provenance.

b. Invertebrate analysis (e.g. entomology)

64.5 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.

b. Accreditation to ISO/IEC 17025

c. Compliance with the Code

65. FSA Definition – Non-Human Biological Examination – Plant and Microbes

65.1 Definition

65.1.1 The determination of species and/or the potential source of plant and/or microbial material.

65.1.2 The following activities, subject to the provisions below, shall be considered to constitute Non-Human Biological plant or microbial Examination.

65.2 Sub-Activities

a. Morphological examination of relevant material.

i. Relevant material refers to any part of a plant (including trees), including seeds, pollen, spores, and flora, and microbes.

b. Macroscopic, microscopic, and immunological tests for species identification

c. DNA analysis for species identification, pedigree analysis, and microbial profiling.

d. The comparison, interpretation, including any statistical evaluation, and reporting of DNA analysis.

65.3 Included in Other FSAs

65.3.1 The following shall not fall within the definition of Non-Human Biological Examination: Plants and Microbes, but are the subject of a different FSA definition:

a. Human DNA Analysis [ref FSA]

b. Non-Human Biological Animal Examination [ref FSA]

c. Case Review [ref Case Review FSA]

65.4 Exclusions from this FSA and the Code

65.4.1 The following shall not fall within the definition of Non-Human Biological Examination: Plants and Microbes, and will not fall under the Code:

a. Analysis to determine geographical provenance.

65.5 Accreditation, Certification, and/or Compliance Required

a. Compliance with the Code

66. FSA Definition – Determination of Drug(s) and/or Noxious Substances

66.1 Definition

66.1.1 Determination of drug(s) (including alcohol) or drug metabolites, and/or noxious substances (including poisons) or their metabolites, from samples suitable for toxicology analysis, and if relevant the determination of the concentration of the drug or noxious substance and/or metabolites.

66.1.2 The following activities, subject to the provisions below, shall be considered to constitute the determination of drug(s) and/or noxious substances.

66.2 Sub-Activities

a. The analysis (whether qualitative or quantitative) of any non-biological item or material believed to originate from a human body (or part thereof) for any drug (including alcohol) or noxious substance (including poison) or their metabolites.

i. Sample types for metabolites will be from human biological samples. Non-biological samples may include beverages/foodstuff.

b. Any analysis which is required in connection with or to assist in understanding of the results of analysis above. Examples include, but are not limited to, the following:

i. The determination of the concentration of preservatives already in any sample.

ii. The determination of the concentration of any drug (including alcohol) in a sample.

c. Provision of reports and/or testimony in relation to any of the following areas.

i. The effect (or possible effect) in general terms of any drug(s) (including alcohol) or noxious substance(s) (including poisons) on an individual.

ii. The manner in which the concentration of any drug(s) (including alcohol) or noxious substance(s) (including poisons), varies in an individual with respect to absorption, distribution, metabolism, elimination, tolerance and/or degradation.

iii. The interpretation of drug concentrations with respect abuse/therapeutic/toxic/fatal levels.

iv. Comment on the presence/significance of alcohol/drugs in non-biological items.

d. This section applies whether or not the person was alive at the time the material was separated from the body or body part

66.3 Included in Other FSAs

66.3.1 The following shall not fall within the definition of Determination of drug(s) and/or noxious substances, but are the subject of a different FSA definition:

a. Drugs and Alcohol Determination under the Road Traffic Act 1988 and Transport and Work Act 1992 [ref]

b. Determination of drugs under s5A of the Road Traffic Act 1988 [ref]

66.4 Exclusions from this FSA and the Code

66.4.1 The following shall not fall within the definition of identification of drug(s) and/or noxious substances, and will not fall under the Code:

a. The analysis of breath for ethanol for road traffic law purposes by any of the following.

b. A type approved roadside screening device.

c. A type approved instrument for evidential purposes.

d. The analysis of any bodily material for any drugs (other than ethanol) for road traffic law and transportation safety purposes, as long as the results shall not be used as the primary evidence of the concentration of any drug found in the Criminal Justice System, by any of the following.

i. A type approved roadside screening device.

ii. Presumptive drug tests at roadside

e. The provision of any evidence in relation to whether a particular compound (or group or class of compounds) is a psychoactive substance in relation to the provisions of the Psychoactive Substances Act 2016.

f. The work of any person registered and licensed by the General Medical Council to act as a medical practitioner.

66.5 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.

b. Accreditation to ISO/IEC 17025

c. Compliance with the Code

67. FSA Definition – Drugs and Alcohol Determination under the Road Traffic Act 1988 and Transport and Work Act 1992

67.1 Definition

67.1.1 Detection and quantification of drugs and alcohol or metabolites thereof in relation to s4 Road Traffic Act 1988, s5 Road Traffic Act 1988, s27 Transport and Work Act 1992 and/or s28 Transport and Works Act 1992

67.1.2 The following activities, subject to the provisions below, shall be considered to constitute Drugs and Alcohol Determination under the Road Traffic Act 1988 and Transport and Work Act 1992

67.2 Sub-Activities

a. The analysis of a blood or urine sample to determine the presence, and where possible concentration of any drug (including alcohol) with the intention that the results be used in an investigation or prosecution (the use in a prosecution includes use by the defence) under:

i. s4 Road Traffic Act 1988;

ii. s5 Road Traffic Act 1988;

iii. s27 Transport and Works Act 1992; and/or

iv. s28 Transport and Works Act 1992

b. The interpretation of results obtained from the analysis to determine whether the drug may have had any impact on the behaviour or abilities of the person from which the sample was taken.

c. Provision of reports and/or testimony in relation to any of the following areas.

i. Whether the sample contained a drug and where possible the concentration of that drug.

ii. Whether the sample contained the metabolites of a drug and where possible the concentration of metabolites.

iii. Whether, at any given time, the concentration (in a human body or any part of a human body) of a drug exceeded a legal limit (s5 RTA 1998).

iv. Whether a drug could have affected the behaviour or ability of a member of the general public.

v. Whether the drug may have had an effect on the behaviour or abilities of the person from whom the sample was taken.

vi. The manner in which the concentration of any drug may have varied over time.

d. Any analysis which is required in connection with or to assist in understanding of the results of analysis described above.

67.3 Included in Other FSAs

67.3.1 The following shall not fall within the definition of Drugs and Alcohol Determination under the Road Traffic Act 1988 and Transport and Work Act 1992, but are the subject of a different FSA definition:

a. Alcohol Technical Calculations [FSA Ref]

b. Preservative Concentration [Tox FSA Ref]

67.4 Exclusions from this FSA and the Code

67.4.1 The following shall not fall within the definition of Drugs and Alcohol Determination under the Road Traffic Act 1988 and Transport and Work Act 1992, and will not fall under the Code:

a. The testing of a suspect by a police officer using type approved ‘road side’ equipment.

b. The testing of a suspect by a police officer using type approved evidential breath alcohol equipment.

67.5 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.

b. Accreditation to ISO/IEC 17025

c. Compliance with the Code

68. FSA Definition – Determination of Drugs in Relation to s5A of the Road Traffic Act 1988

68.1 Definition

68.1.1 Detection and quantification of drugs in relation to s5A of the Road Traffic Act 1988

68.1.2 The following activities, subject to the provisions below, shall be considered to constitute Determination of drugs under s5A of the Road Traffic Act 1988

68.2 Sub-Activities

a. The analysis of a blood sample to determine the presence and/or concentration of any drug subject to a legal limit under The Drug Driving (Specified Limits) (England and Wales) Regulations 2014 (as amended) with the intention that the results be used in an investigation or prosecution under s5A Road Traffic Act 1988.

i. The use in a prosecution includes use by the defence.

b. The interpretation of results obtained from the analysis described above to determine whether the concentration of the relevant drug is likely to be higher than the applicable legal limit.

c. The assessment of the potential impact of the measurement/analysis method on the accuracy and/or precision of the results and the determination of whether the sample was over the applicable legal limit.

d. The assessment of factors that might impact on the accuracy and/or precision of the results and the determination of whether the sample was over the applicable legal limit.

e. Provision of reports and/or testimony in relation to any of the following areas.

i. Whether the blood sample contained a drug subject to a legal limit created under the Regulations noted above.

ii. Whether the concentration of any drug in the blood sample exceeded the legal limit for that drug created under the Regulations noted above.

f. Any analysis which is required in connection with or to assist in understanding of the results of analysis described above.

68.3 Included in Other FSAs

68.3.1 The following shall not fall within the definition of Determination of drugs under s5A of the Road Traffic Act 1988, but are the subject of a different FSA definition:

a. Analysis for drugs under s4 Road Traffic Act 1988.

68.4 Exclusions from this FSA and the Code

68.4.1 The following shall not fall within the definition Determination of drugs under s5A of the Road Traffic Act 1988, and will not fall under the Code:

a. The testing of a suspect by a police officer with type approved ‘roadside’ testing equipment.

68.5 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.

b. Accreditation to ISO/IEC 17025

c. Compliance with the Code

68.6 Other parts of the Code that relate to this FSA

a. The Analysis and Reporting of Forensic Specimens in Relation to s5A Road Traffic Act 1988 (C-133)

69. FSA Definition – Alcohol Technical Calculations

69.1 Definition

69.1.1 Alcohol technical calculations based on evidential breath, blood or urine concentrations, critical timings, and claimed drinking patterns.

69.1.2 The following activities, subject to the provisions below, shall be considered to constitute alcohol technical calculations.

69.2 Sub-Activities

a. Any of the following activities undertaken in relation to an offence under the Road Traffic Act 1988 or the Transport and Works Act 1992.

i. The estimation of breath, blood, or urine alcohol concentrations at any time, other than the time of measurement, based on the measurement of the concentration of alcohol in blood, breath or urine.

ii. The estimation of breath, blood, or urine alcohol levels at any time based on a stated pattern of drinking.

iii. The assessment of the possible impact of drinking alcohol after a specific time on the concentration of alcohol in breath, blood, or urine at the specific time.

iv. The assessment of the possible impact of imbibing a ‘spiked’ drink on the concentration of alcohol in breath, blood, or urine at any time.

v. The assessment of the concentration of alcohol in blood/breath at a stated time of next driving

vi. The interpretation of the overall evidence from the aspects of both mathematics and physiology, to assess the credibility of the driver’s account.

vii. The evaluation of the likelihood of alcohol appearing in the body by means of some route other than consumption, such as by inhalation, auto-brewery syndrome, vapes, foods, medications and through the use of skin wipes

viii. The possible effect, if any, of regurgitation and vomiting on breath analysis.

b. The provision of reports and/or testimony in relation to any of the following matters.

i. The results of any of the work above.

ii. The significance of the findings of the activities discussed above in relation to the concentration of alcohol in breath, blood, or urine at any time.

iii. The significance of the findings of the activities above in relation to the impairment of a driver at any given time.

iv. The rate at which alcohol may be absorbed and eliminated by the body of a person, class of persons or any person.

c. If conducted the following are covered by this FSA:

i. the assessment of the potential impact of the measurement/analysis method on the reliability of the concentration of alcohol in breath, blood or urine or whether that concentration was above a legal limit.

ii. the assessment of the potential impact of any factors extraneous to the measurement/analysis on the reliability of the determination of the concentration of alcohol in breath, blood or urine or whether that concentration was above a legal limit.

d. Although it would be unusual, the same calculations could also apply to the Railways and Transport Safety Act 2003.

69.3 Included in Other FSAs

69.3.1 The following shall not fall within the definition of Alcohol Technical Calculations, but are the subject of a different FSA definition:

a. Drugs and Alcohol Determination under the Road Traffic Act 1988 and Transport and Work Act 1992 [ref]

b. Determination of drugs under s5A of the Road Traffic Act 1988 [ref]

c. Determination of drug(s), and/or noxious substances [ref]

69.4 Accreditation, Certification, and/or Compliance Required

a. Compliance with the Code

70. FSA Definition – Legal Classification and Identification of Drugs, Psychoactive Substances, and/or Associated Materials

70.1 Definition

70.1.1 The identification, quantification, and legal classification of drugs, psychoactive substances, drug precursors, and/or associated materials

70.1.2 The following sub-activities, subject to the provisions below, shall be considered to be Legal classification of drugs and identification of psychoactive substances, and/or associated materials.

70.2 Sub-Activities

a. Sexing cannabis plants (where possible) and drying cannabis plants to preserve evidence.

b. Selecting a portion of the material submitted for analysis.

c. Analysis (whether qualitative or quantitative) of any item to determine whether it is comprised of, contains, or is any relevant substance(s) or associated materials(s)’.

d. The determination of the proportion of material which is a relevant substance(s) (‘purity').

e. Provision of reports and/or testimony in relation to any of the following areas.

f. What the quantity of the material in the submitted item is (e.g. weight/volume)

g. Whether the submitted item contains a relevant substance, and where relevant, the proportion of the submitted material that is a relevant substance

h. Whether a matter or compound is a relevant substance or associated materials.

i. What legal controls apply to a relevant substance according to the Misuse of Drugs Act 1971 (as amended) and/or the Psychoactive Substances Act 2016

70.3 Note

a. In this section the term ‘relevant substance’ means anything falling within the descriptions below.

i. Any matter or compound which is listed (by name or by class) in any Schedule to the Misuse of Drugs Act 1971.

ii. Any matter or compound (other than one falling within sub-clause (a)) which is subject to any type of control as a result of any form of order issued under powers established by the Misuse of Drugs Act 1971.

iii. Any matter or compound which is a psychoactive substance within the provisions of the Psychoactive Substances Act 2016.

b. In this section the term ‘associated materials’ includes cutting agents, additives, and diluents.

70.4 Included in Other FSAs

70.4.1 The following shall not fall within the definition of Classification and determination of drugs, psychoactive substances, drug precursors, and/or associated materials, but are the subject of a different FSA definition:

a. Determination of drug(s) and/or noxious substances. [ref]

b. Friction Ridge Detail: Visualisation and Imaging [ref]

c. Friction Ridge Detail: Comparison [ref]

d. Human DNA Analysis. [ref]

e. Determination of controlled drug(s) traces and/or associated materials [ref]

f. Assessment of and advice on the preparation and/or supply of drugs and/or psychoactive substances [ref]

70.5 Exclusions from this FSA and the Code

70.5.1 The following shall not fall within the definition of Classification and determination of drugs, psychoactive substances, drug precursors, and/or associated material, and will not fall under the Code:

a. The testing of any item, or part thereof, to determine whether it is comprised of or contains a relevant substance in the circumstances set out below.

i. With a Home Office approved kit under the processes permitted by a Home Office Circular.

ii. With a Home Office approved kit under the processes set out in the Evidential Drug Identification Testing (EDIT) programme.

iii. With any presumptive kit so long as the results are not to be used in evidence.

b. The identification of cannabis under any process permitted by a Home Office Circular or the EDIT Programme.

c. The provision of any evidence in relation to the primary information on the psychoactivity of a particular compound (or group or class of compounds) in relation to the provisions of the Psychoactive Substances Act 2016.

d. The screening of people at an airport or other transport hub

70.6 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.

b. Accreditation to ISO/IEC 17025

c. Compliance with the Code

71. FSA Definition – Determination of Controlled Drug(s) Traces and/or Associated Materials

71.1 Definition

71.1.1 The location, recovery including selecting a portion, and qualitative analysis of any item to determine whether there are any traces of a relevant substance or associated material present.

71.1.2 The following activities, subject to the provisions below, shall be considered to be the determination of controlled drug(s) traces and/or associated materials.

71.2 Sub-Activities

a. Selecting a portion of the submitted item contents for analysis

b. Qualitative analysis of any item (other than material believed to be a relevant substance) to determine whether it has any traces of a relevant substance or associated material.

c. Provision of reports and/or testimony in relation to any of the following areas.

i. Whether any part of the item contents has a relevant substance or associated material on it.

ii. Where possible, interpretation of the significance of the presence of relevant substance on or in the items examined.

iii. What legal controls apply to any a relevant substance(s) detected according to the Misuse of Drugs Act 1971 (as amended). And/or the Psychoactive Substances Act 2016.

71.3 Note

71.3.1 In this section the term ‘relevant substance’ means anything falling within the descriptions below.

a. Any matter or compound which is listed (by name or by class) in any Schedule to the Misuse of Drugs Act 1971.

b. Any matter or compound (other than one falling within sub-clause (a)) which is subject to any type of control as a result of any form of order issued under powers established by the Misuse of Drugs Act 1971.

c. Any matter or compound which is a psychoactive substance within the provisions of the Psychoactive Substances Act 2016.

d. In this section the term ‘associated materials’ includes cutting agents, additives, and diluents.

71.4 Included in Other FSAs

71.4.1 The following shall not fall within the definition of Determination of controlled drug(s) traces and/or associated materials, but are the subject of a different FSA definition:

a. Determination of drug(s) and/or noxious substances. [ref]

b. Friction Ridge Detail: Visualisation and Imaging [ref]

c. Friction Ridge Detail: Comparison [ref]

d. Human DNA Analysis. [ref]

e. Determination of controlled drug(s) traces and/or associated materials [ref]

f. Assessment of and advice on the preparation and/or supply of drugs and/or psychoactive substances [ref]

71.5 Exclusions from this FSA and the Code

71.5.1 The following shall not fall within the definition of Determination of controlled drug(s) traces and/or associated materials, and will not fall under the Code:

a. The testing of any item, or part thereof, to determine whether it is comprised of or contains a relevant substance in the circumstances set out below.

i. With a Home Office approved kit under the processes permitted by a Home Office Circular.

ii. With a Home Office approved kit under the processes set out in the Evidential Drug Identification Testing (EDIT) programme.

iii. With any presumptive kit so long as the results are not to be used in evidence.

b. The determination, quantification, and legal classification of drug precursors.

c. The screening of people at an airport or other transport hub

71.6 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.

b. Accreditation to ISO/IEC/IEC 17025

c. Compliance with the Code

72. FSA Definition – Assessment of and Advice on the Preparation, Production, and/or Supply of Drugs and/or Psychoactive Substances

72.1 Definition

72.1.1 Assessment of materials (including packaging and paraphernalia) used, or suspected of use, in the preparation and/or supply of material believed to be drugs or psychoactive substances.

72.1.2 Advice on the production, method of synthesis or cultivation and/or yield of drugs or psychoactive substances.

72.1.3 The following activities, subject to the provisions below, shall be considered to be assessment and advice on the preparation and/or supply of drugs and/or psychoactive substances.

72.2 Sub-Activities

a. Assessment of the material submitted for analysis

b. The examination or analysis (whether qualitative or quantitative) of any item, or material recovered from an item, to determine:

i. Whether it could be employed in the production or preparation to supply of a relevant substance.

ii. Whether it can be connected to a particular preparation or supply source of a relevant substance.

c. The determination of the actual yield, or potential yield, of any means of production of a relevant substance.

d. The interpretation of results from the examination/analysis (whether qualitative or quantitative) of any item (other than an item believed to be a relevant substance [ref Drugs ID FSA]), or material recovered from an item, to determine:

i. Whether it could have been employed in the production or supply of a relevant substance.

ii. Whether it can be connected to a particular production source of a relevant substance.

iii. Whether it can be connected to a particular supply source of a relevant substance.

e. The provision of advice, reports, and/or testimony in relation to any of the following matters.

i. The synthetic routes to produce drugs.

ii. What drugs may be synthesised from given compounds.

iii. The identification of materials used in the production process

iv. The legal status of any relevant substance produced

v. Common associated materials for particular drugs as evidence of production

vi. The actual and/or potential yield of any method of growing relevant substances.

vii. The estimated yield of any synthetic method

viii. Whether any item can be linked to a particular source of production of a relevant substance.

ix. Whether any item can be linked to a particular source of supply of a relevant substance.

x. Whether an item can be linked to another item used in the preparation/supply of a relevant substance.

xi. Whether separate items can be linked to a common, or single, source of production or supply.

72.3 Note

72.3.1 In this section the term ‘relevant substance’ means anything falling within the descriptions below.

a. Any matter or compound which is listed (by name or by class) in any Schedule to the Misuse of Drugs Act 1971.

b. Any matter or compound (other than one falling within sub-clause (a)) which is subject to any type of control as a result of any form of order issued under powers established by the Misuse of Drugs Act 1971.

c. Any matter or compound which is a psychoactive substance within the provisions of the Psychoactive Substances Act 2016.

72.4 Included in Other FSAs

72.4.1 The following shall not fall within the definition of Assessment of and advice on the preparation and/or supply of drugs and/or psychoactive substances, but are the subject of a different FSA definition:

a. Determination of drug(s) and/or noxious substances [ref FSA]

b. Fingerprint comparison [ref FSA]

c. DNA Examination and analysis. [Ref FSA]

d. Analysis, identification and/or legal classification of drugs or psychoactive/ substances [Ref FSA]

e. Analysis of traces of controlled drugs [Ref FSA]

f. Marks comparison to linking packaging [ref marks FSAs]

72.5 Exclusions from this FSA and the Code

72.5.1 The following shall not fall within the definition of Assessment of and advice on the preparation and/or supply of drugs and/or psychoactive substances, and will not fall under the Code:

a. The provision of any evidence in relation to whether a particular compound (or group or class of compounds) is psychoactive in relation to the provisions of the Psychoactive Substances Act 2016.

b. Drugs value estimation

c. The testing of any item, or part thereof, to determine whether it is comprised of or contains a relevant substance in the circumstances set out below.

i. With a Home Office approved kit under the processes permitted by a Home Office Circular.

ii. With a Home Office approved kit under the processes set out in the Evidential Drug Identification Testing (EDIT) programme.

iii. With any presumptive kit so long as the results are not to be used in evidence.

d. The screening of people at an airport or other transport hub

72.6 Accreditation, Certification, and/or Compliance Required

a. Compliance with the Code

73. FSA Definition – Marks Visualisation/Imaging

73.1 Definition

73.1.1 The application of techniques and treatments to relevant areas to visualise latent marks and to improve the level of detail in indistinct marks, to enable more reliable comparisons to be made and more robust evidence to be provided.

73.1.2 The following shall, subject to the provisions below, be considered to be Marks: Visualisation and Imaging.

73.2 Sub-Activities

a. The macroscopic or microscopic assessment of a relevant area where a mark, either latent or visible, may be present to determine a technique, or sequence of techniques, that could be employed to most effectively reveal further detail within that area.

b. The application of the determined technique or techniques.

c. The macroscopic or microscopic consideration of the outcome of the application of the determined technique or techniques to assess whether they have performed as expected and remedial action if they have not.

d. Marking up relevant detail.

e. The use of appropriate techniques, both physical and digital, to optimise image capture.

f. Recording of the mark(s).

g. The contextual consideration to determine the activity that caused the deposition

73.3 Included in Other FSAs

73.3.1 The following shall not fall within the definition of Marks: Visualisation and Imaging, but are the subject of a different FSA definition:

a. Visualisation and imaging of friction ridge detail. [ref FSA]

73.4 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.

b. Accreditation to ISO/IEC 17025

c. Compliance with the Code

73.5 Sections of FSRA that Apply

73.5.1 Article 2 subsections 2a,2b; Article 4,5,6,7,9 and 11

74. FSA Definition – Marks Comparison

74.1 Definition

74.1.1 The evaluation of whether or not a mark or a series of marks could have been made by an item or items suspected of making them.

74.1.2 Such marks may be present on any substrate and in any medium, including skin and substrates that allow for three-dimensional representation of the item responsible.

74.1.3 The following activities, subject to the provisions below, shall be considered to be Marks: Comparison.

74.2 Sub-Activities

a. The macroscopic or microscopic comparison of two or more marks, from one or more scenes, to determine whether or not they could have been made by the same item, including screening exercises.

b. The macroscopic or microscopic examination/analysis of a mark, or marks, to determine what may have caused it, either generically or specifically, including coding of marks, where appropriate with reference to suitable database material.

c. The operation/interrogation of a database referred to in clause (b).

d. The macroscopic or microscopic comparison of a mark or marks, howsoever made, with an item suspected of making it/them, including screening exercises, to determine areas of agreement and difference.

e. The macroscopic or microscopic examination/analysis of a mark to determine an activity that may have led to the production of that mark.

i. Consideration of externally manifested non-penetrating injuries, such as bruising, suspected of having been caused by kicking or stamping, striking with a weapon (improvised or otherwise) or a ligature, is included within this FSA and is not considered to be pathology.

ii. Consideration of tool/implement marks in bone or cartilage is included within this FSA and is not considered to be pathology.

f. The recording, including the creation of a cast, of any mark

g. Recovery of erased marks

h. The production of appropriate test impressions from an item, or items, suspected of having made, or contributed to, a mark.

i. Toolmark examination is included within this FSA

74.3 Included in Other FSAs

74.3.1 The following shall not fall within the definition of Marks: Comparison, but are the subject of a different FSA definition:

a. Marks Visualisation [FSA Ref].

b. Activity carried out at an incident scene [Ref Scene FSA].

c. Firearms: Ballistics [ref]

d. Firearms and Ammunition Classification [ref]

e. Footwear examination [ref]

f. Friction Ridge Detail Visualisation and Comparison [ref]

74.4 Exclusions from this FSA and the Code

74.4.1 The following shall not fall within the definition of Marks: Comparison, and will not fall under the Code:

a. The examination of penetrating wounds.

b. The examination of bite marks.

c. The analysis of any preserved or recovered evidence.

d. Any chemical or biological analysis of the material comprising the mark(s).

74.5 Accreditation, Certification, and/or Compliance Required

a. ISO/IEC 17025;

b. Accreditation to ISO/IEC 17025

c. Compliance with the Code

75. FSA Definition – Friction Ridge Detail: Visualisation and Imaging

75.1 Definition

75.1.1 Techniques and treatments applied to suspected areas of friction ridge detail to visualise latent marks and to improve the level of detail in indistinct marks to support reliable comparisons to be carried out.

75.1.2 The following shall, subject to the provisions below, be considered to be Friction Ridge Detail: Visualisation and Imaging.

75.2 Sub-Activities

a. The macroscopic or microscopic consideration of an area of friction ridge detail, either latent or visible, to determine a technique, or sequence of techniques, that could be utilised to most effectively reveal friction ridge detail within that area.

b. The application of the determined technique or techniques. Techniques can be physical in nature, such as the application of light sources or a variety of powders, or chemical.

c. The macroscopic or microscopic consideration of the outcome of the application of the determined technique or techniques to assess whether they have performed as expected and remedial action if they have not.

d. Marking up relevant detail.

e. The use of appropriate and specialist lighting, camera settings and optics to optimise image capture.

f. When necessary, the use of post-capture image processing to appropriately compensate for perceived failings in the image.

g. Capture and recording of the friction ridge detail

h. The contextual macroscopic or microscopic consideration of an area of friction ridge detail to determine the activity that caused the deposition.

75.3 Exclusions from this FSA and the Code

75.3.1 The following shall not fall within the definition of Friction Ridge Detail: Visualisation and Imaging, and will not fall under the Code:

a. Any chemical or biological analysis of the area of friction ridge detail for whatever purpose.

75.4 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.

b. Accreditation to ISO/IEC 17025

c. Compliance with the Code

75.5 Other parts of the Code that relate to this FSA

a. Friction Ridge Detail (Fingermark) Visualisation and Imaging (C127)

76. FSA Definition – FRD Comparison

76.1 Definition

76.1.1 Comparison of friction ridge detail including from finger, phalange, palm or plantar, exclude or support, same source.

76.1.2 The following activities, subject to the provisions below, shall be considered to constitute the Comparison of friction ridge detail.

76.2 Sub-Activities

a. The macroscopic or microscopic comparison of two areas of friction ridge detail, howsoever made and presented, to determine whether or not they originated from the same source.

b. The interrogation of a database.

c. The provision of an appropriate source level result.

d. The consideration of an area of friction ridge detail to determine the activity or handling that caused the deposition.

e. This definition should be taken to refer to friction ridge detail from persons living or deceased.

f. This definition also applies where friction ridge skin has become detached from its host through injury.

76.3 Included in Other FSAs

a. Activity carried out at the scene of an incident. [incident scene REF]

b. National Databases [FSA Ref]

c. The visualisation of latent friction ridge detail by either physical or chemical means to facilitate the activities listed [FSA Ref]

d. The enhancement of a mark by either physical or chemical means to facilitate the activities listed [Marks FSA]

76.4 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.

b. Accreditation to ISO/IEC 17025

c. Compliance with the Code

76.5 Other parts of the Code that relate to this FSA

a. Friction Ridge Detail (Fingerprint) Comparison (C128)

76.6 Sections of FSRA that Apply

76.6.1 Article 2 subsections 2a,2b; Article 4,5,6,7,9 and 11

77. FSA Definition – Footwear Coding and Scene Linking

77.1 Definition

77.1.1 The provision of information to link incident scenes through the consideration of footwear impressions recovered from those various scenes.

77.1.2 The following activities, subject to the provisions below, shall be considered to be Footwear: Coding and Scene Linking.

77.2 Sub-Activities

a. The receipt in the forensic unit of footwear marks, in whatever format and howsoever produced, from an incident scene.

b. Such enhancement as is considered appropriate and proportionate to the case in question.

c. The macroscopic and/or microscopic examination of the footwear mark(s) received.

d. The use of a reference database to:

i. Identify the undersole pattern represented in the mark by reference to an alpha-numeric code which ordinarily indicates manufacturer and style/model of footwear; and

ii. Identify other occurrences of the undersole pattern at other scenes.

e. The provision of an appropriate report.

77.3 Included in Other FSAs

77.3.1 The following shall not fall within the definition of Footwear: Coding and Scene Linking, but is the subject of a different FSA definition:

a. Any chemical or biological analysis of the material comprising the mark(s). [ref]

b. Any comparison with an item of footwear suspected of making the recovered mark(s). [ref]

c. Activity carried out at an incident scene. [ref Incident Scene Examination FSA]

d. Assessment of damage [Ref Damage and Physical Fit FSA].

77.4 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.

b. Accreditation to ISO/IEC 17025

c. Compliance with the Code

78. FSA Definition – Footwear Screening

78.1 Definition

78.1.1 The assessment of whether or not items of footwear or known prints from pertinent footwear could have made footwear marks recovered from one or more scene with a view to recommending whether or not an evidential comparison is carried out.

78.1.2 The following activities, subject to the provisions below, shall be considered to be Footwear: Screening.

78.2 Sub-Activities

a. The receipt and examination of one or more items of footwear pertinent to:

i. A detained person or persons,

ii. A person or persons suspected of involvement in crime,

iii. A location relevant to anyone covered in (i) and (ii) above; or

iv. An individual who has legitimate access to the scene of incident.

b. Reference to/operation of a database to determine the undersole pattern present on the submitted footwear item(s)

c. The consideration and preservation or recovery of relevant evidence types unrelated to footwear examination.

d. The production of appropriate test impressions from the footwear in question.

e. The receipt of footwear marks, in whatever format and howsoever produced, from one or more incident scenes. This includes receipt of items, recovered from incident scenes, which bear footwear marks.

f. Any necessary recovery or capture of the submitted mark(s).

g. Appropriate enhancement of the submitted marks as necessary.

h. The macroscopic examination of the footwear mark(s) received.

i. The provision of an appropriate report recommending, or not, whether a full evidential comparison should be carried out.

78.3 Note

78.3.1 Screening can involve:

a. One or more items of footwear, whether recovered from individuals suspected of involvement of an incident or incidents under investigation, or from locations associated with those individuals.

b. One or more items of footwear, or test impressions taken from the footwear, of individuals known to have had legitimate access to the scene of incident.

78.3.2 Screening submissions may be the result of Coding and Scene Linking activities such as are described in FSA [ref]. Screening activities as described in this FSA can lead to evidential comparisons as described in FSA [ref].

78.4 Included in Other FSAs

78.4.1 The following shall not fall within the definition of Footwear: Screening, but may be the subject of another FSA definition as indicated:

a. Screening does not include an assessment of evidential strength

b. Consideration of externally manifested injuries, such as bruising, suspected of having been caused by kicking or stamping. [ref footwear comparison]

c. Activity carried out at an incident scene.

d. The analysis of any preserved or recovered evidence.

e. Any chemical or biological analysis of the material comprising the mark(s).

f. Assessment of damage [Ref Damage and Physical Fit FSA].

78.5 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.

b. Accreditation to ISO/IEC 17025

c. Compliance with the Code

79. FSA Definition – Footwear Comparisons

79.1 Definition

79.1.1 The assessment of whether or not items of footwear could have contributed to footwear marks recovered from one or more scenes and includes the evaluation of evidential strength.

79.1.2 The following activities, subject to the provisions below, shall be considered to be Footwear: Comparison.

79.2 Sub-Activities

a. The receipt and examination of one or more items of footwear pertinent to:

i. A detained person or persons,

ii. A person or persons suspected of involvement in crime; or

iii. A location relevant to anyone covered in (i) and (ii) above.

b. Reference to/operation of a database to determine the undersole pattern present on the submitted footwear item(s).

c. The consideration and preservation or recovery of relevant evidence types unrelated to footwear examination.

d. The production of appropriate test impressions from the submitted footwear.

e. The receipt and assessment of footwear marks, in whatever format and howsoever produced, from one or more incident scenes. This includes receipt of items, recovered from incident scenes which bear footwear marks.

f. Appropriate enhancement of the submitted mark(s) as necessary.

g. The macroscopic and/or microscopic examination of the footwear mark(s) received.

h. A macroscopic and/or microscopic comparison between the submitted footwear, or test impressions from the submitted footwear, and marks from incident scenes to determine areas of agreement and difference.

i. The comparison of bruising to footwear falls under this FSA, and is not considered forensic pathology in this context.

i. An interpretation of the comparison described at (h), including an evaluation of the evidential strength in the context of the competing propositions.

j. The provision of an appropriate report.

79.3 Note

79.3.1 Comparison can cover:

a. One or more items of footwear, whether recovered from individuals suspected of involvement of an incident or incidents under investigation, or from locations associated with those individuals.

b. One or more items of footwear, or test impressions taken from the footwear, of individuals known to have had legitimate access to the scene of incident; and

c. Comparison of footwear as described at (a) and (b) above with one or more marks recovered from one or more scenes of incident or injury marks.

79.3.2 Comparison may come about as a direct consequence of an investigation, or it may follow on from Coding and Screening activities such as are described in FSA [ref] and FSA [ref] respectively. Those FSAs should be read in conjunction with this.

79.4 Included in Other FSAs

79.4.1 The following shall not fall within the definition of Footwear: Comparison, but is the subject of a different FSA definition:

a. Activity carried out at an incident scene; [ref Incident scene examination]

b. Any chemical or biological analysis of the material comprising the mark(s). [ref Human Body fluid and biological material examination FSA] [ref General Mark visualisation]

79.5 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.

b. Accreditation to ISO/IEC 17025

c. Compliance with the Code

80. FSA Definition – Damage and Physical Fit

80.1 Definition

80.1.1 Determination of the cause of damage sustained and/or the reconstruction of part/whole item from two or more parts, to link implements/individuals to incidents and/or provide information as to the type of implement involved in an incident.

80.1.2 The following activities, subject to the provisions below, shall be considered to constitute Damage and Physical Fit.

80.2 Sub-Activities

a. Macroscopic visual inspection of items and/or component parts, noting general condition, damage, and any associated staining

i. The sample types that may be assessed include any type of physical material that is susceptible to damage and/or that can be broken

ii. The sample may be given as separate exhibits or searched for (for example stab cuts in fabric).

b. Microscopical inspection to a identify and document detailed physical feature that characterise the nature of damage, to allow assessment of how and when damage was caused.

c. Recording and comparison of fracture surfaces, if applicable

d. Instrumental analysis of component parts, if applicable

e. Comparison between damage and alleged damage causing implements, to determine whether the damage could have been caused by a particular implement.

f. Comparison with control damage features produced with a considered implement.

g. Reconstructive comparison between two or more items that may once have been part of one item, and assessment of evidential value of fit.

h. Sampling and comparison of component parts if conclusive fit cannot be established.

i. Assessment of how (including using reconstruction simulations) and when damage was caused.

i. If simulations are conducted, this may enable targeting of specific areas on the item for “touch” DNA [see Human DNA analysis].

j. Assessment and determination of damage caused by corrosive substances is covered under this section. [see also Analysis of corrosives FSA].

80.3 Included in Other FSAs

80.3.1 The following shall not fall within the definition of Damage and Physical Fit, but are the subject of a different FSA definition:

a. Recovery and determination of trace materials transferred by contact, including as a result of a damage incident [Contact Trace ref]

b. Ballistic damage, including examination and comparison of fired ammunition [ref], and firearm incident examination and/or reconstruction [ref]

c. Burn/Heat/Fire damage [Fire scene FSA]

d. Tool marks [ref]

e. Collision investigation [collision scene, physical vehicle component]

80.4 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.

b. Accreditation to ISO/IEC 17025

c. Compliance with the Code

81. FSA Definition – Taggant Determination

81.1 Definition

81.1.1 The determination of the presence of known reference taggants used to mark items of property, assets, or offenders during a criminal offence, to repatriate items recovered, connect individuals to the involvement in an alleged criminal offence, and/or identify counterfeit products.

81.1.2 The following activities, subject to the provisions below, shall be considered to constitute Taggant Determination.

81.2 Sub-Activities

a. Locating taggant markers and presumptive testing, at crime scenes, within custody suites, and within labs, including using torches with the relevant wavelength spectrum for fluorescent identification, microscopes for microdots and coloured particles, and chemical detectable agents.

i. Low discrimination taggants such as greases and coloured powders are included within this FSA for Taggant Determination.

ii. In this section, the sub-activities may apply when there are multiple taggants presenting on exhibits.

b. Sampling and recovery of taggant

c. Analysis of the taggant using appropriate validated techniques

d. Comparison of results against a searchable reference database.

81.3 Exclusions from this FSA and the Code

81.3.1 The following shall not fall within the definition of Taggant Determination, and will not fall under the Code:

a. Manufacture of taggants and performance to defined standards. However, practitioners should be aware of the robustness and limitations of taggants through the use of relevant standards.

b. Activities solely used for non-criminal justice system purposes.

c. The analysis of any preserved or recovered evidence unrelated to taggant examination.

81.4 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories (away from scene and/or extension to scope for scenes).

b. Accreditation to ISO/IEC 17025

c. Compliance with the Code

82. FSA Definition – Determination of Corrosives and/or Noxious Substances

82.1 Definition

82.1.1 Determination of material believed to be noxious, including a lachrymator, and/or corrosive used in alleged attacks.

82.1.2 The following activities, subject to the provisions below, shall be considered to constitute Determination of corrosive and/or noxious substances.

82.2 Sub-Activities

a. Selecting a portion of the material submitted for analysis.

b. The examination and/or analysis (whether qualitative or quantitative) of any item to determine whether it comprises, contains, or is contaminated with any relevant substance.

i. The item may consist of a liquid, solid, or be traces of corrosive or lachrymatory traces on clothing or swabs.

c. The determination of the concentration of a relevant substance, where the nature or the volume of the material submitted permits.

d. The assessment of any container holding a suspected corrosive liquid to determine if this can be discharged as a spray or jet.

e. The examination of any container holding a suspected lachrymator to determine if this can be considered a firearm under Section 5 of the Firearms Act 1968.

f. Provision of opinions and assessment of findings in relation to the above activities.

g. If done, determination of pre-cursers (including but not limited to hydrochloric acid and acetone) and poisonous metals (such as mercury) is included within this FSA definition of determination of corrosive and/or noxious substances.

82.3 Note

a. In this section the term ‘relevant substance’ means anything listed in Schedule 1 of the Offensive Weapons Act 2019.

82.4 Included in Other FSAs

82.4.1 The following shall not fall within the definition of Determination of corrosive and/or noxious substances, but are the subject of a different FSA definition:

a. Determination of drug(s) and/or noxious substances [ref FSAs]

b. Damage and physical fit [ref]

82.5 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.

b. Accreditation to ISO/IEC 17025

c. Compliance with the Code

83. FSA Definition – Determination of Residues of Lubricants used in Sexually Motivated Crime, Including Oils, Greases, Lubricants,

83.1 Definition

83.1.1 Recovery and determination of substances used as lubricants in sexual offence cases, and evaluation of the findings in the context of the alleged circumstances or to inform lines of inquiry.

83.1.2 The following activities, subject to the provisions below, shall be considered to constitute Determination of non-particulates, including oils, greases, lubricants.

83.2 Sub-Activities

a. Visual examination, including low power microscopy, for the purpose of locating relevant material and their residues and comparisons using appropriate lighting techniques.

b. Recovery of relevant material and their residues.

i. Extraction methods for polar and non-polar lubricants (aqueous and organic) are included, and suitable analytical methods should be used.

ii. Solvent extraction of previously prepared extracts (body fluid/DNA).

c. Speculative extraction of swabs and targeted areas of items to detect and identify latent residues through chemical analysis, supported by extraction and analysis of appropriate control samples.

d. Thin layer chromatography comparisons against known samples, if applicable.

e. Comparison of any residues detected with a suspected source from reference items.

f. Establishing the absence of residues of a substance where circumstances permit such inferences.

83.3 Note

a. In this FSA, relevant material refers to non-particulate substances, including oils, greases, lubricants, and similar. Some of the materials identified will be genuine lubricants, but others may not be recognised as such.

83.4 Included in Other FSAs

83.4.1 The following shall not fall within the definition of Determination of residues of lubricants used in sexually motivated crime, including oils, greases, lubricants, and similar, but are the subject of a different FSA definition:

a. Examination at scenes [ref Incident Scene Examination FSA]

83.5 Exclusions from this FSA and the Code

83.5.1 The following shall not fall within the definition of Determination of residues of lubricants used in sexually motivated crime, including oils, greases, lubricants, and similar, and will not fall under the Code:

a. Determination of particulate substances (such as talc) and hydrocarbon lubricants (such as baby oil and Vaseline)

b. Analysing non-particulates for breaches of the Trade Descriptions Acts from 1968 and 1972; this FSA is for lubricants in sexual assault cases, not for general automotive type lubricants.

c. Provision of opinions relating to absorption or interpretations of what may be remaining after application to human skin.

83.6 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.

b. Accreditation to ISO/IEC 17025

c. Compliance with the Code

84. FSA Definition – Determination of Ignitable Liquids and their Residues

84.1 Definition

84.1.1 Recovery, identification, and comparisons of volatile ignitable liquids, their associated residues from samples including fire debris samples and clothing of individuals believed to have been handling ignitable liquids, and materials impregnated with volatiles or their residues.

84.1.2 The following activities, subject to the provisions below, shall be considered to constitute Determination of Ignitable Liquids and their Residues.

84.2 Sub-Activities

a. Recovery to include sampling, extraction, and determination of ignitable liquids or their residues.

b. Comparison of ignitable liquids/ignitable liquid residues recovered from fire debris or other material with reference samples of ignitable liquids.

c. Evaluation of the relevant ignitable liquids in relation to the case circumstances provided.

d. Assessment of materials with a view to establishing their explosive effect in relation to being considered a petrol bomb which is classed as an ‘explosive substance’ under the Section 3 (b) of the 1883 Explosive Substances Act.

e. In this section, the sub-activities may apply to mixtures of ignitable liquids with each other or with other substances (e.g. engine oil).

84.3 Exclusions from this FSA and the Code

84.3.1 The following shall not fall within the definition of the recovery and determination of ignitable liquids and their residues, and will not fall under the Code:

a. Flammability assessment

b. Interpretation of use in relation to fire investigation, including (but not limited to) assessment of potential harm

c. Determination of the particular source of an ignitable liquid.

d. Recovery, determination, and comparisons of:

i. Non-volatile substances (such as paper, wood, etc).

ii. Gases (such as Methane, Ethane, Propane, Butane, or Hydrogen).

iii. Inorganic oxidising salts (such as Nitrates, Nitrites, Chlorates, Chlorites, Permanganate, Sugar or Hydrocarbon Waxes)

84.4 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.

b. Accreditation to ISO/IEC 17025

c. Compliance with the Code

84.5 Sections of FSRA that Apply

84.5.1 Article 2 subsections 2a,2b; Article 4,5,6,7,9 and 11

85. FSA Definition – Recovery and Determination of Trace Materials Transferred by Contact

85.1 Definition

85.1.1 The recovery and determination of particulate trace materials (as defined) that could be transferred as a result of contact.

85.1.2 The following activities, subject to the provisions below, shall be considered to constitute Recovery and determination of trace materials transferred by contact.

85.2 Sub-Activities

a. The examination of an item, including the use of any presumptive testing kits, to locate residues of relevant material.

b. The observation (including with microscopy), preservation, recovery and/or image capture of relevant material from an item using such techniques as are deemed appropriate for the material under consideration.

c. The examination or analysis of recovered relevant material and its comparison with a control sample, using such visual/microscopic, physical and analytical techniques as are deemed appropriate.

d. The examination or analysis of relevant material with the intention of providing advice, reports, and/or testimony in relation to any of the following.

i. The potential source of relevant material.

ii. The originating source of the relevant material, and/or information regarding manufacture/manufacturer.

iii. The distribution methods or extent or distribution of the relevant material or the source from which it originated.

iv. Assessment regarding how/where/when material was acquired.

v. Determination of an activity that may have led to the transfer of the relevant material(s).

85.3 Note

85.3.1 A trace is defined as a residual amount of material that has transferred to an item or individual as the result of an activity. That material:

a. Can be biological and/or non-biological in nature.

b. May, by its presence, indicate contemporaneous proximity of an individual or item to relevant locations.

c. May, by its presence, indicate participation in a given activity relevant to the incident under investigation.

85.3.2 In this section ‘relevant material’ is the substance of interest in the incident under investigation. Relevant material may include.

a. Glass

b. Surface coatings, polymers, and adhesives

c. Textile and natural fibres

d. Ceramics, fibreglass, asbestos, lead, and other building material not contained within clauses (a) to (c).

e. Generated particulate material not contained within clauses (a) to (d)

85.4 Included in Other FSAs

85.4.1 The following shall not fall within the definition of Recovery and determination of trace materials transferred by contact, but may be in a different FSA definition:

a. Human DNA analysis [ref]

b. Drugs Examination and Analysis [ref]

c. Determination of drug(s) and/or noxious substances [ref]

d. Taggants [ref]

e. Physical Damage [ref]

f. Gunshot residue analysis [ref]

g. Determination of non-particulates (lubricants) [ref]

h. Determination of corrosive and/or noxious substances [ref]

i. Botanical traces, such as pollen and vegetation [Non-human Biological Examination: Plants and Microbes FSA]

85.5 Exclusions from this FSA and the Code

85.5.1 The following shall not fall within the definition of Recovery and determination of trace materials transferred by contact, and will not fall under the Code:

a. Diatoms

b. Entomology

85.6 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.

b. Accreditation to ISO/IEC 17025

c. Compliance with the Code

86. FSA Definition – Determination of Gunshot Residue

86.1 Definition

86.1.1 The examination of samples recovered from any person, item, or location to determine whether or not gunshot residue is present.

86.1.2 The following activities, subject to the provisions below, shall be considered to constitute the determination of gunshot residue.

86.2 Sub-Activities

a. The examination of a person, item, or location to recover particulate samples which may contain gunshot discharge residue. This covers any residue created by the primer, cartridge case, projectile, gun barrel or the propellant. This includes presumptive testing for the presence of metals, particularly lead and copper.

b. The analysis of any recovered samples, such as adhesive lifts (e.g. stubs) or swabs, to determine:

i. Whether it has gunshot residue on it.

ii. Whether the amount and distribution of GSR recovered from an examined item

iii. Whether or not there are particles on the sample that indicate material from a non-firearm pyrotechnic source (e.g. fireworks or vehicle airbags) is present on the examined item

c. Analysis and interpretation of recovered particulate material including on stubs, swabs, and clothing, to determine if gunshot residue is present and the category (e.g. propellant, primer, projectile) and type (different elemental compositions in the ammunition primer) of gunshot residue present.

d. The comparison of GSR on a sample from a suitable control sample, such as a gun barrel swab, fired cartridge case or scene kit, to GSR identified on samples from examined items.

e. The provision of reports and/or testimony in relation to any of the following.

i. Whether any item or residue has gunshot residue on it or in it.

ii. The significance of the presence or absence of GSR.

86.3 Included in Other FSAs

86.3.1 The following shall not fall within the definition of Determination of gunshot residue, but are the subject of a different FSA definition:

a. Examination of Incidents [ref Scene FSA]

b. Firearms [ref]

c. Screening of items/persons for explosives residue [ref Explosives]

86.4 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.

b. Accreditation to ISO/IEC 17025

c. Compliance with the Code

87. FSA Definition – Classification of Firearms and Ammunition

87.1 Definition

87.1.1 Assessment of an item suspected of being a firearm, ammunition, or component part of a firearm or ammunition, to determine their classification under the provisions of the Firearms Act 1968.

87.1.2 The following activities, subject to the provisions below, shall be considered to constitute classification of firearms and ammunition.

87.2 Sub-Activities

a. The test firing of an item to determine firing distance and weapon accuracy

b. Any preliminary assessment or classification for the purpose of remanding a suspect in custody.

c. Any preliminary assessment of classification for the purpose of a charging decision.

d. Any assessment of lethality.

e. The determination of kinetic energy of a projectile fired from a suspected firearm.

f. Testing the trigger pressure/pull required to discharge a weapon.

g. Examination of the mechanical condition of the weapon and assessing potential causes of unintentional discharge.

87.3 Note

87.3.1 In this section the term firearm means any item which is subject to the controls of the Firearms Act 1968.

87.4 Exclusions from this FSA and the Code

87.4.1 The following shall not fall within the definition of Classification of Firearms and Ammunition, and will not fall under the Code:

a. The identification of any irritant or noxious substance which might be discharged from a suspected firearm.

87.5 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.

b. Accreditation to ISO/IEC 17025

c. Compliance with the Code

88. FSA Definition – Firearms: Ballistics

88.1 Definition

88.1.1 The assessment of any characteristics on fired or cycled ammunition or fired components of ammunition.

88.1.2 The following activities, subject to the provisions below, shall be considered to constitute Firearms: Ballistics

88.2 Sub-Activities

a. The identification of a weapon by the macroscopic and/or microscopic examination of any characteristics on fired or cycled ammunition or fired components of ammunition.

b. Linking any cycled ammunition, or fired components of ammunition, to an incident scene.

c. Linking cycled ammunition, or any fired component of ammunition, to a firearm.

d. The use of any database system to record and/or compare features of ammunition, or components of ammunition, to link incidents.

e. Test firing of firearms to generate ammunition or ammunition components for the use in database systems.

f. Interpretation of damage (whether to objects or people) caused, or believed to have been caused, by the discharge of a firearm.

g. Ballistics calculations including trajectories and maximum ranges

88.3 Note

88.3.1 In this section the term firearm means any item which is subject to the controls of the Firearms Act 1968.

88.4 Included in Other FSAs

88.4.1 The following shall not fall within the definition of Firearms: Ballistics, but are the subject of a different FSA definition:

a. National databases [ref]

b. Reference databases [ref]

88.5 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.

b. Accreditation to ISO/IEC 17025

c. Compliance with the Code

89. FSA Definition – Vehicle Component Examination

89.1 Definition

89.1.1 Determination of whether or not a vehicle component contributed to a collision.

89.1.2 The following activities, subject to the provisions below, shall be considered to be Vehicle Component Examination.

89.2 Sub-Activities

a. The receipt within a Forensic Unit of a component of a vehicle which has been involved in a collision.

b. Any examination(s) of, or testing carried out on, a component of a vehicle involved in a collision to determine that component’s failure mode.

c. An interpretation of the findings from the examination(s), in the context of competing hypotheses, to address the specific issues in question.

d. The provision of reports and/or testimony relating to the above.

89.3 Note

89.3.1 A ‘component’ of a vehicle includes those which function in effective isolation, or which function as part of a multi-component system.

89.4 Included in Other FSAs

89.4.1 The following shall not fall within the definition of Vehicle Component Examination, but are the subject of a different FSA definition:

a. Activity carried out as part of the incident scene examination [ref Incident Scene FSA].

89.5 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.

b. Accreditation to ISO/IEC 17025

c. Compliance with the Code

90. FSA Definition – Recovery and Determination of Hazardous Chemical and Biological Agents and Associated Materials

90.1 Definition

90.1.1 The recovery and determination of hazardous chemical and biological agents and associated materials.

90.1.2 The following activities, subject to the provisions below, shall be considered to constitute Determination of hazardous chemical and biological agents and associated materials.

90.2 Sub-Activities

a. The examination of any item, person or location to determine whether relevant material is present.

b. The recovery from any person or location of any relevant material or item of the descriptions below.

i. An item comprised of relevant material.

ii. An item which has relevant material in or on it.

c. The examination or analysis of any item or matter to determine the identity and nature of relevant material present.

d. The examination or analysis of any item or matter to determine any of the following.

i. The potential immediate source (e.g. device or dissemination mechanism) of relevant material.

ii. The degree of similarity of separate samples of relevant material.

iii. The degree of similarity of a sample of relevant material to any reference material or sample of known origin.

iv. The quantity and/or purity of material present

v. The activity, toxicity or infectious nature of a chemical or biological material.

vi. For biological agents, genetic composition to allow strain identification

vii. Whether an outbreak of a disease is naturally occurring, accidental or deliberate.

90.3 Note

90.3.1 In this section, subject to the points below, relevant material means any of the following.

a. A chemical or biological agent produced or held in circumstances where the possession amounts to a criminal offence.

b. A chemical or biological agent which is being produced or held with the intention that it may be used for, or to facilitate, the commission of a criminal offence.

c. Any chemical or biological agent which is being produced or used for, or to facilitate, the commission of a criminal offence.

d. Any chemical or biological agent which has contaminated any person or location as the result of a criminal offence or attempt to commit an offence.

e. Any precursor chemical or material, or breakdown products relevant to any hazardous chemical or biological material

90.3.2 The nature of the substance as a chemical or biological agent must be a significant factor in the nature of the criminal offence referred to above.

90.3.3 The definition of the criminal offence need not refer to chemical or biological agents.

90.3.4 The term chemical agent means a chemical weapon as defined in s1 Chemical Weapons Act 1996.

90.3.5 The term biological agent means any biological agent, toxin or weapon or genetically modified forms of any of the above subject to the provisions of the Biological Weapons Act 1974.

90.3.6 Any reference to a chemical or biological agent shall be taken to include any material produced by or from the agent.

90.4 Included in Other FSAs

90.4.1 The following shall not fall within the definition of Determination of hazardous chemical and biological agents and associated materials, but are the subject of a different FSA definition:

a. Analysis to determine the presence of corrosive substances and lachrymators [ref FSA]

b. Energetic and radiological materials [ref NF FSA]

90.5 Exclusions from this FSA and the Code

90.5.1 The following shall not fall within the definition of Determination of hazardous chemical and biological agents and associated materials, and will not fall under the Code:

a. Clinical or diagnostic testing

b. Consideration of the potential method of production and/or the geographical source (i.e. national geographical location or production facility) of any relevant material.

90.6 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.

b. Accreditation to ISO/IEC 17025

c. Compliance with the Code

91. FSA Definition – Assessment and Determination of Radioactive Material

91.1 Definition

91.1.1 The recovery, identification, and assessment of radioactive material to provide information to direct a criminal investigation and evidence in criminal proceedings.

91.1.2 The following activities, subject to the provisions below, shall be considered to constitute Assessment and determination of radioactive material.

91.2 Sub-Activities

a. The examination of any item, person, or location to determine whether relevant material is present.

b. The recovery from any person or location of any relevant material or item of the descriptions below.

i. An item comprised of or contains relevant material.

ii. An item which has relevant material on it.

c. The examination or analysis of any item or matter to determine any of the following.

i. The identification of the relevant isotope.

ii. The potential immediate source (i.e. device) of relevant material.

iii. The degree of similarity of different samples of relevant material.

iv. The degree of similarity of a sample of relevant material to any reference material or sample of known origin.

91.3 Note

91.3.1 Subject to the points below, relevant material means any of the following.

a. A radioactive substance held in circumstances where the possession amounts a criminal offence other than an offence under laws related to:

i. Health and safety at work; or

ii. Environmental protection.

b. A radioactive substance which is held with the intention that it may be used for, or to facilitate, the commission of a criminal offence.

c. Any radioactive substance which is being used for, or to facilitate, the commission of a criminal offence.

d. Any radioactive material which has contaminated any person or location as the result of a criminal offence or attempt to commit an offence.

91.3.2 The radioactive nature of the substance must be a significant factor in the nature of the criminal offence referred to above.

91.3.3 The definition of the criminal offence need not refer to radioactive material.

91.3.4 In this section radioactive substance means material which would be radioactive material under the provisions of the Radioactive Substances Act 1993.

91.3.5 Any subcontracted information relied upon for the above sub-activities must be made sure to be suitable.

91.4 Exclusions from this FSA and the Code

91.4.1 The following shall not fall within the definition of assessment and determination of radioactive material, and will not fall under the Code:

a. Determination of the potential geographical source (i.e. nation, geographical location, or production facility) of any relevant material.

91.5 Accreditation, Certification, and/or Compliance Required

a. Compliance with the Code

92. FSA Definition – Assessment and Determination of Explosives, Explosives Precursors, and Explosive Residues

92.1 Definition

92.1.1 Recovery, analysis, identification, and assessment of material suspected to be an explosive substance, explosives precursor or explosives residue.

92.1.2 The following activities, subject to the provisions below, shall be considered to constitute Determination of explosives, explosives precursors, and explosives residues.

92.2 Sub-Activities

a. The examination of any submitted material to determine whether relevant material is present.

b. The recovery from any person, item or location of any relevant material or item of the descriptions below.

i. An item comprised of relevant material.

ii. An item which has relevant material in or on it.

c. The examination or analysis of any item or matter to determine the nature of any relevant material present. This includes trace and bulk explosives analysis.

d. The examination, analysis or assessment of any item or matter to determine any of the following.

i. The potential generic sources of relevant material.

ii. Within the limitations of techniques available, to determine the degree of similarity of individual samples of relevant material, and/or a sample of relevant material to any reference material or sample of known origin.

iii. The potential explosives significance of chemical precursors.

iv. The cause and/or circumstances of an explosion

e. The examination, analysis, or assessment of any items to determine whether they (or anything produced from them) are capable of producing a viable explosive substance.

f. The provision of advice, reports, and/or testimony in relation to the following matters.

i. The examination and analysis set out above.

ii. The meaning of the findings obtained in the examination and analysis discussed above.

iii. Which explosive substances may be produced from any materials, including in cases where no such materials have been recovered (e.g. from a methodology in a written publication or other form of media, such as video).

92.3 Note

92.3.1 In this section, subject to the points below, relevant material means any of the following.

a. An explosive substance or explosives precursor held in circumstances where the possession amounts to a criminal offence.

b. An explosives residue that has been recovered from any person, item or location as the result of a criminal offence or attempt to commit an offence.

92.3.2 The term ‘explosive substance’ shall cover any substance which would be subject to the provisions of the Explosives Act 1875, the Explosive Substances Act 1883, or the Explosives Regulations 2014.

92.4 Included in Other FSAs

92.4.1 The following shall not fall within the definition of Determination of explosives, explosives precursors, and explosives residues, but are the subject of a different FSA definition:

a. Examination of explosive devices, component parts of devices or remnant parts of such a device post explosion. [ref]

b. Firearms discharge residues examination and analysis [ref]

c. Firearms examination [ref]

d. Ignitable liquid analysis [ref]

92.5 Exclusions from this FSA and the Code

92.5.1 The following shall not fall within the definition of Determination of explosives, explosives precursors, and explosives residues, and will not fall under the Code:

a. Screening of items/persons/locations for explosives residue, including the screening of people at an airport or other transport hub.

b. Interpretation of screening results, for example from airport samples

92.6 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.

b. Accreditation to ISO/IEC 17025

c. Compliance with the Code

93. FSA Definition – Assessment of Explosive Devices

93.1 Definition

93.1.1 Assessment of explosive devices, component parts of devices or remnant parts of such a device post explosion.

93.1.2 The following activities, subject to the provisions below, shall be considered to constitute Assessment of explosive devices.

93.2 Sub-Activities

93.2.1 The following activities when undertaken following an explosives related incident.

a. The examination of any person, item, or location to determine whether relevant material is present.

b. The recovery from any person, item or location of any relevant material or item of the descriptions below.

i. An item comprised of relevant material.

ii. An item which has relevant material in or on it.

c. The examination or analysis of any item or matter to determine the explosives significance of any material present.

d. The examination or analysis of any item or matter to determine any of the following.

i. The cause and/or circumstances of an explosion.

ii. The composition of the explosive device.

iii. The potential viability of the explosive device.

iv. The potential of the explosive device to cause harm to people or damage to property.

e. The provision of advice reports, or testimony in relation to the following matters.

i. The examination and analysis discussed above.

ii. The meaning of the findings obtained in the examination and analysis discussed above.

iii. The result, or potential result, of the use of an explosive device.

93.3 Note

93.3.1 In this section, subject to the points below, relevant material means any of the following.

a. Components of explosive devices.

b. Electrical components including wiring.

c. Literature or other medium (e.g. video) providing instructions for the preparation of explosive devices.

d. Materials other than an explosive substance or chemical accelerant which could be used to modify the nature of an explosion, including shrapnel.

93.3.2 The term ‘explosive substance’ shall cover any component part which would be subject to the provisions of the Explosives Act 1875, the Explosive Substances Act 1883, or the Explosives Regulations 2014.

93.4 Included in Other FSAs

93.4.1 The following shall not fall within the definition of Assessment of explosive devices, but are the subject of a different FSA definition:

a. Recovery, Examination and Analysis of explosives, explosives precursors and explosives residues [ref]

b. Fuel-air explosions [Ref Fire scene FSA]

93.5 Exclusions from this FSA and the Code

93.5.1 The following shall not fall within the definition of Assessment of explosive devices, and will not fall under the Code:

a. Screening of items/persons/locations for explosives residue, including the screening of people at an airport or other transport hub.

93.6 Accreditation, Certification, and/or Compliance Required

a. Compliance with the Code

94. FSA Definition – Data Capture and Processing from Digital Media

94.1 Definition

94.1.1 Screening, capture and processing of data from digital storage media, comprising both standalone storage devices, cloud storage as well as volatile and non-volatile memory embedded within electronic computing devices, including at scenes of incident.

94.1.2 The following activities, subject to the provisions below, shall be considered to constitute Data capture and processing from digital media.

94.2 Sub-Activities

a. The preparation of any relevant device for any activity listed below (this includes phones and the imaging of drives.)

b. The provision of a physical device, the transfer of data, or other similar activities from the point at which data are captured or provided to the police.

c. Screening or recovery of data from a device using an off-the-shelf tool for factual reporting.

d. The examination of a relevant device, media or component to locate or capture any information stored on or accessible via the device in digital/electronic format (i.e. cloud storage).

e. Any process to render any data into a useable, or more useable, form.

f. The processing of any data with the purpose of facilitate further analysis.

94.3 Included in Other FSAs

94.3.1 The following shall not fall within the definition of data capture and processing from digital media, but are the subject of another FSA definition:

a. Images from CCTV systems [ref Image FSA].

b. Analysis of the content an audio file (as opposed to recovery from a device with mixed media) [technical audio operations]

c. Cell site analysis [ref FSA].

d. Forensic collision investigation [ref FSA].

e. Crime scene photography [ref Incident scene FSA].

f. The recovery from a working CCTV system [ref FSA].

94.4 Exclusions from this FSA and the Code

94.4.1 The following shall not fall within the definition of data capture and processing from digital media and will not fall under the Code:

a. Screening of media for the purpose of offender management.

b. Real time identification of a familiar person

c. The manual classification of indecent images of children.

d. The operation of automatic number plate recognition systems.

e. The operation of an eFit process.

f. Video replay for viewing with no further analysis (acknowledging that there may be quality limitations to the material viewed) e.g. where statements other

than statements of continuity or PACE Code D statements are required, the exclusion does not apply.

94.5 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.

b. Accreditation to ISO/IEC 17025 by October 2022

c. Compliance with the Code

95. FSA Definition – Digital Data Analysis

95.1 Definition

95.1.1 Analysis of recovered digital data with the intention of reporting a finding whether factual or opinion based.

95.1.2 The following activities, subject to the provisions below, shall be considered to constitute Digital Data Analysis.

95.2 Sub-Activities

a. The analysis of the following recovered data is considered in scope.

i. Data files created by a user or from third party source (e.g. word processing, spreadsheet, image, video or audio).

ii. Information related to communications (e.g. calls, e-mails, text, social media) including the content of the communication and any data relating to the communication.

iii. Reverse-engineering from proprietary data structures or malware.

iv. Information related to Internet use.

v. The manual manipulation of data from an embedded database file (e.g. SQLite, LevelDB) into a human readable format.

vi. Records related to the location of the device.

vii. Any information or metadata related to the data types listed above.

viii. Information related to activities carried out on or by the computer system (e.g. operating system logs, configuration files, file system metadata, file metadata)

b. The analysis of any data described in clause ‘a’ with the purpose of providing advice, intelligence, or evidence The interpretation of any data described in clause ‘a’ with the purpose of providing opinion to include, but not limited to:

i. The provenance or integrity of files/data. User activity (e.g. file creation, patterns of use),

ii. The reliability / accuracy of data (e.g. recovered timestamps/GPS locations).

iii. The effect of any virus or malware presence

iv. Whether the data had been obfuscated.

95.3 Included in Other FSAs

95.3.1 The following shall not fall within the definition of digital data analysis, but are the subject of a different FSA definition:

a. Visual comparison of image content (whether still or moving) created by the user or from third party source (e.g. social media downloads, CCTV systems). [image FSA]

b. Analysis of the content an audio file (recovery of such data from a device with mixed media is subject to a separate FSA). [technical audio FSA]

c. Cell site analysis [ref FSA].

d. Forensic collision investigation [ref FSA].

e. Crime scene photography [ref Incident Scene FSA].

f. The analysis of footage from a working CCTV system [ref image FSA].

95.4 Exclusions from this FSA and the Code

95.4.1 The following shall not fall within the definition of digital data analysis, and will not fall under the Code:

a. The operation of automatic number plate recognition systems.

b. The operation of an eFit process.

c. The manual classification of indecent images of children.

d. Real time identification of a familiar person

e. Video replay for viewing with no further analysis

95.5 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.

b. Accreditation to ISO/IEC 17025 by October 2022

c. Compliance with the Code

96. FSA Definition – Network Capture and Analysis

96.1 Definition

96.1.1 Capture and analysis of network traffic to understand the properties/setup of the network.

96.1.2 The following activities, subject to the provisions below, shall be considered to constitute Network capture and analysis.

96.2 Sub-Activities

a. Traffic collection and analysis

b. Network Topology Diagram including information gathering about complainants network setup (large, multi-site environment, multi-server, multi-platform, internal and cloud based).

c. Data-link and physical layer analysis (Ethernet)

d. Transport and network layer analysis (TCP/IP)

e. Netflow analysis

f. DNS review/analysis

g. Analysing IP addresses captured on a live network

h. Dynamic Host Configuration Protocol Review

i. Packet collectors (sniffers), protocol analyzers and Network Forensic Analyzers

j. Recovery of any of the above from networks with or without the assistance of network administrators

k. Application layer analysis (e.g. HTTP, FTP, SMTP, encryption)

l. Log collection and analysis

m. Performing Network Security Monitoring

n. The use of threat intelligence

96.3 Accreditation, Certification, and/or Compliance Required

96.3.1 Compliance with the Code

97. FSA Definition – Digital Geolocation Analysis

97.1 Definition

97.1.1 Radio frequency, Electro-Magnetic (EM) survey, mapping and/or cellsite analysis for geo-location.

97.1.2 The following activities, subject to the provisions below, shall be considered to be Digital Geolocation Analysis.

97.2 Sub-Activities

a. Radio Frequency (RF) or Electro-Magnetic (EM) Propagation Survey of an area or location guided by case scenario and/or Call Data Records.

b. Cell Site Analysis to determine the likelihood of the suspect device being a specific location is opinion (i.e. expert) evidence and includes but is not limited to:

i. Processing and normalisation of Call Data Records or other network provider data for the purposes.

ii. Mapping of cell sites and cell site coverage.

iii. Assessment and evaluation of Call Data Records or other network provider data against survey data.

c. Assessment and evaluation of RF or EM survey data, with reference to Call Data Records or other relevant network data for the purpose of a report of statement for the Criminal Justice System.

d. The evaluation of the significance of propagation survey and/or network information, using Call Data Records any of the above sub-activities (or products of activities e.g. maps) to determine the likelihood of the suspect device being a specific location is expert opinion evidence.

97.3 Exclusions from this FSA and the Code

97.3.1 The following shall not fall within the definition of Digital Geolocation Analysis, and will not fall under the Code:

a. The lawful acquisition of communications data by an authorised Communications Data Investigator - Single Point of Contact (CDI-SPoC) is to be performed in accordance with the Investigatory Powers Act 2017 and related codes of practice but is in itself not a forensic science activity for the purpose of this Code.

97.4 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.

b. Accreditation to ISO/IEC 17025 by date TBC

c. Compliance with the Code

97.5 Forensic Documents that apply

a. C-135

98. FSA Definition – Basic Recovery and Acquisition of Images

98.1 Definition

98.1.1 The recovery and acquisition of still and moving images from digital CCTV systems and related digital media using manufacturer of the CCTV systems intended method.

98.1.2 The following activities, subject to the provisions below, shall be considered to constitute Recovery and Acquisition of images.

NB: This FSA is under review with the NPCC CCTV Portfolio

98.2 Sub-Activities

98.2.1 The recovery, acquisition and processing use force approved methods of any part of the content of an image or video file including.

a. Receiving files from the owner of the CCTV system.

b. Taking possession of a DVR of DVR as an item.

c. Recovery of CCTV footage from digital CCTV system in situ by using the manufacturer of the system in question intended method:

i. Export video (exporting files using CCTV system, copying via analogue or digital output).

ii. Extraction of removable media intended by the manufacturer to be portable.

d. The following data recovery from media:

i. Physical capture and preservation of data.

ii. Creation of a master.

e. Creating and production of stills digital (basic brightness and contrast adjustment to entire image is permitted if included in the approved method).

f. Use of Digital Evidence Management System/Software if approved by the senior accountable individual.

i. Uploading where a master is created.

ii. Redaction if included in the approved method.

g. Conversion of video files for viewing or presentation purposes, where a master is created.

h. Clipping for length of incident.

i. Removing/redacting audio from footage.

j. PACE Code D compliant statements.

98.3 Included in Other FSAs

98.3.1 The following shall not fall within the definition of Recovery and acquisition of images, but are the subject of a different FSA definition:

a. Data recovery from the DVR once no longer in the original working system [ref Digital image comparison].

98.4 Exclusions from this FSA and the Code

98.4.1 The following shall not fall within the definition of recovery and acquisition of images, but may be the subject of another FSA definition as indicated:

a. Capture of an image and subsequent identification of an individual or individuals by recognition through familiarity.

b. General observation of individuals or places.

98.5 Accreditation, Certification, and/or Compliance Required

98.5.1 Any sub-activities in scope above beyond receipt of the physical item (i.e. files, DVR) should be included in a forensic units’ accreditation if the forensic unit is intending to use the output for further forensic science activities, or should be included in FSA XXX.

98.5.2 However where recovery and presentation of the footage as a clip or still is the expected end of the process and the following apply, accreditation is not required.

a. The organisations forensic unit has approved processes, methods and tools to be used in this forensic science activity based upon current practices such as Dstl’s publication. Recovery and Acquisition of Video Evidence.

b. The forensic unit or wider organisation records and maintain competence of staff it authorises to conduct the above work.

c. Practitioners adhere to the standards of conduct in this Code and the practices outline in the appendix XXX .

NB: This FSA is under review with the NPCC CCTV Portfolio to ensure the framework includes sufficient controls for this dispensation.

99. FSA Definition – Digital Image Comparison

99.1 Definition

99.1.1 Recovery, examination and comparison of digital images of persons (including faces) and physical items such as clothing or vehicles.

99.1.2 The following activities, subject to the provisions below, shall be considered to constitute Digital Image Comparison.

99.2 Sub-Activities

99.2.1 The processing or analysis of any part of the content of an image or video file to include any of the following.

a. Recovery of CCTV footage from a DVR removed from the CCTV system i.e. when no longer in situ’.

b. Recovery of CCTV footage using a third-party tool i.e. using methods other than the manufacturer intended methods.

c. Data recovery through reverse engineering

d. Legacy analogue format conversion, enhancement or recovery.

e. Enhancement/processing of digital images/video

f. Production of digital stills for any further analytical analysis including but not limited to comparison purposes (other than PACE Code D activities)

g. Production of composite footage i.e. not simply editing for length

h. Redaction or masking of subjects or objects’ in footage or stills

99.2.2 The processing or analysis of any part of the content of an image or video file to include any of the following which are opinion evidence.

a. Image comparison

b. Height estimation

c. Speed estimation from CCTV (note this may be part of a separate activity such as collision investigation)

d. Analysis of timing information

e. Authenticity

f. Assessment, Comparison and/or evaluation of images with the following reference objects

i. Number plates

ii. Vehicles

iii. Clothing

g. Search of a captured image against a database of reference images or defined candidate list (watchlist).

h. The evaluation of the significance of any matching features between the image and reference/control exhibits to determine the likelihood of the object in the image being that of the exhibit object.

i. The comparison of the content of any image (whether moving or not) or any audio file with any other information (whether recovered from a relevant device or not) to provide any advice, intelligence or evidence.

j. Other image content analysis

99.3 Exclusions from this FSA and the Code

99.3.1 The following shall not fall within the definition of Digital Image Comparison, but may be the subject of another FSA definition as indicated:

a. The operation of automatic number plate recognition systems.

b. The operation of an eFit process.

c. Capture of an image and subsequent identification of an individual or individuals by recognition through familiarity.

d. General observation of individuals (including gait) or places.

99.4 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.

b. Accreditation to ISO/IEC 17025

c. Compliance with the Code

100. FSA Definition – Technical Audio Operations

100.1 Definition

100.1.1 Preparation of audio material for downstream processing and analysis.

100.1.2 The following activities, subject to the provisions below, shall be considered to constitute Technical audio operations.

100.2 Sub-Activities

a. Making copies of sound files

b. Transferring sound files from one physical medium to another, e.g. from a CD to a memory stick or computer hard drive

c. Converting sound files from one digital format to another, e.g. where the original sound file is in a proprietary non-standard format, it may need to be converted to a standard one

d. Digitisation of recordings from old analogue sources (tapes)

e. Converting 2 channel (stereo) recordings to single channel (mono)

f. Recovering recordings and preserving evidence

g. Conversion of various technical characteristics of recordings, e.g sampling rates, levels (loudness)

h. Editing/redaction of sound files

100.3 Included in Other FSAs

100.3.1 The following shall not fall within the definition of Technical audio operations, but are the subject of a different FSA definition:

a. Speech and Audio higher level activities [ref FSA]

100.4 Accreditation, Certification, and/or Compliance Required

a. Compliance with the Code

101. FSA Definition – Speech and Audio Higher Level Activities

101.1 Definition

101.1.1 The analysis and comparison of voice and speech from digital formats.

101.1.2 The following activities, subject to the provisions below, shall be considered to constitute Speech and Audio higher level activities.

101.2 Sub-Activities

a. Forensic Speaker Comparison

i. The comparison of a voice in a questioned (criminal) recording with that of a person of interest, which includes:

- the degree of correspondence of the analytically separable components.
- acoustic measurements of physical parameters of the speech signal.
- expert interpretation

ii. provision of opinion

b. Questioned Content Analysis/Transcription

i. Determination of the words spoken in a recording.

ii. ‘transcription’ (large quantity of speech), ‘questioned content’ or ‘questioned utterance’ (analysis for narrow, localised areas).

c. Authenticity Examinations

i. Examining recordings for evidence of their having been edited or tampered with.

d. Enhancement of recordings

i. The application of digital sound processing procedures to recordings in order to reduce background noise and potentially improve the intelligibility of speech.

e. Speaker Profiling

i. Examining the unknown voice in a recording for information about the speaker.

f. Sound Source Analysis

i. Examining a sound in a recording (usually a non-speech sound) in an attempt to determine its source/cause.

101.3 Included in Other FSAs

101.3.1 The following shall not fall within the definition of Speech and Audio higher level activities, but are the subject of a different FSA definition:

a. Technical Audio Operations [ref FSA]

101.4 Exclusions from this FSA and the Code

101.4.1 The following shall not fall within the definition of Speech and Audio higher level activities, and will not fall under the Code:

a. Sound propagation/Acoustic reconstruction of crime scenes

b. Assessment of Lay-Witness Testimony on Speaker Recognition and Assistance with setting up/evaluating ‘voice parades’

101.5 Accreditation, Certification, and/or Compliance Required

a. Compliance with the Code

102. FSA Definition – Document Handwriting

102.1 Definition

102.1.1 Authorship determination of a handwritten or signature entry on a document.

102.1.2 The following activities, subject to the provisions below, shall be considered to constitute Document Handwriting.

102.2 Sub-Activities

a. Determination of whether writing or a signature on a document, or any part of a document, has been produced by:

i. A specific person;

ii. The same person as any text or signature entries on any other part of a document; or

iii. The same person as any text or signature entries on any part of a separate document.

102.3 Note

102.3.1 The sub-activities above apply to examination of any of the following:

a. Any document containing text or images even if the text or image is not visible to the unaided human eye.

i. Any document refers to a physical item other than a monitor, or other screen, displaying electronic data.

b. Any text or signature, including indented or erased writing

c. Any marks on the document.

d. Any text or signature resulting from the capture of human movement by an electronic device.

102.4 Included in Other FSAs

102.4.1 The following shall not fall within the definition of Document Handwriting, but are the subject of a different FSA definition:

a. Document Authenticity [ref FSA]

102.5 Exclusions from this FSA and the Code

102.5.1 The following shall not fall within the definition of Document Handwriting, and will not fall under the Code:

a. The examination of tachographs other than where such examination is to fulfil the definition in this FSA.

b. Any consideration of whether or not text entries or a signature on a document have been produced by a specific person based on personal knowledge rather than scientific evaluation.

c. The determination of authorship of any electronically generated text or signature which is not the result of capture of human movement by an electronic device.

102.6 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.

b. Accreditation to ISO/IEC 17025

c. Compliance with the Code

103. FSA Definition – Document Authenticity and Origin

103.1 Definition

103.1.1 Assessment of the authenticity of a document to determine whether it is (in its entirety or in part) what it purports to be, an imitation, an authentic but illegitimately altered example of what it purports to be, and assessment of the origin of anonymous documents.

103.1.2 The following activities, subject to the provisions below, shall be considered to constitute Document Authenticity and origin.

103.2 Sub-Activities

a. Determination of whether the document, any part of the document, the text or images within the document has been produced by:

i. Any specific equipment.

b. The same equipment as any part of a separate document.

c. The same materials as any part of the same document.

i. The same materials as any part of a separate document.

d. Determination of the type of equipment (e.g., printer and perhaps specific model of printer) which was used to create, change, or alter the appearance of the document.

e. Characterisation of the materials used to create, modify, or change the appearance of the document.

f. Relative dating of a document or documents, or of an alteration of part of a document.

i. Relative dating can include the determination of, for example, whether a document can only have been produced before or after a certain date because of its specific method of production, materials used in its production, or the content of the text it bears. It can also include sequencing of entries.

g. Determination of whether a document has been altered or the appearance changed after its creation or a relevant significant event (e.g., its signature, the affixing of any stamp/seal etc).

h. Anything done to make visible, or to recover, text or images which are present (whether directly or indirectly) but not visible to the unaided eye, including indented or erased writing.

i. The scrutiny of a document for the purpose of determining the presence of security features by, but not limited to the following.

j. The use of light sources (including those wavelengths outside the visible spectrum) and magnification, perhaps combined with imaging processes.

103.3 Note

103.3.1 The sub-activities above apply to any of the following:

a. Any document containing text or images even if the text or image is not visible to the unaided human eye.

i. Any document refers to a physical item other than a monitor, or other screen, displaying electronic data.

b. Any text, including indented or erased writing, or images which forms part of the document.

c. Any marks on the document.

d. Any equipment which may be used to create, copy, or alter the appearance of a document (even if the copy is not a physical document).

e. The examination of any materials which may form a document, part of a document or be used to change a document or alter the appearance of a document

f. Paper or other substrate.

g. Inks or other marking materials.

103.3.2 The term ‘materials’ means inks, paper, bindings and such like.

103.4 Included in Other FSAs

103.4.1 The following shall not fall within the definition of Document Authenticity and Origin, but are the subject of a different FSA definition:

a. Recovery of erased identification numbers from vehicles and firearms [ref Marks Visualisation FSA]

b. Document Handwriting [ref]

c. Damage and physical fit [ref]

103.5 Exclusions from this FSA and the Code

103.5.1 The following shall not fall within the definition of Document Authenticity and Origin, and will not fall under the Code:

a. The examination of tachographs other than where such examination is to fulfil one of the clauses outlined in the definition of this FSA.

b. Any consideration of whether any of the following is true based on personal knowledge rather than scientific evaluation.

i. Whether a document is genuine.

ii. Whether a document has been modified after its creation or any relevant significant event.

103.6 Accreditation, Certification, and/or Compliance Required

a. BS EN ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.

b. Accreditation to ISO/IEC 17025

c. Compliance with the Code

104. FSA Definition – Case Review

104.1 Definition

104.1.1 The re-examination of completed, unsolved, or otherwise unresolved cases, results, and/or interpretations to identify additional forensic opportunities and/or to address the alternative propositions.

104.1.2 The following activities, subject to the provisions below, shall be considered to constitute Case Review.

104.2 Sub-Activities

a. Review of all the previous forensic findings in the context of the most up-to-date case circumstance information (which may be different to that which was previously available), and with knowledge of all currently available material.

i. All findings, including physical and digital evidence, should be reviewed.

ii. All sample types across multiple scientific disciplines may be considered and will be dependent on the content of the original case,

iii. Examinations may include extensive documentation of multiple layers of historical packaging. In some cases, it may be necessary to recover debris, take control DNA samples, and re-exhibit layers of packaging before examining the exhibit itself.

b. Assessment of:

i. whether the nature and scope of scientific investigations are/were appropriate to the case circumstances

ii. whether the examined items were the correct ones

iii. the methodology for arriving at the scientific findings, and the limitations of applied methods.

iv. The continuity and integrity of items

v. The results, quality assurance measures, and critical findings checks to ascertain what can be reliability concluded, and what might have been missed

vi. The reliability and validity of previous findings

c. Identification of new opportunities, in the light of current and potential future technologies, that might provide new intelligence leads, identify offenders, or support whether or not a crime occurred.

i. If further novel examinations are to be conducted, preparation for new examinations through case assessment, proposition setting, scientific/technology applicability assessment, and setting examination strategy considering prioritisation and phasing of examination.

d. Identification of exhibits and/or retained materials to be located and submitted.

e. Conduct and/or supervise new examinations and analysis

i. Examination and analysis sub-contracted to 3rd party organisations is not covered by this FSA, however, any sub-contracted examination and analysis needs to comply with the relevant FSA and have the appropriate accreditation. The results of sub-contracted examination and analysis need to be fully incorporated into the review and interpretations.

f. Preservation of material, with a consideration of unknown future scientific developments, to facilitate future reviews.

g. Assess and interpret findings from new examination/analysis in light of scientific papers and new research, which may include interrogation of databases

h. Post-conviction appeal cases and Criminal Cases Review Commission (CCRC) cases are within Scope of this FSA.

104.3 Included in Other FSAs

104.3.1 The following shall not fall within the definition of Case Review, but are the subject of a different FSA definition:

a. Standard reviews during major crime live investigations [ref Incident Scene FSA]

104.4 Exclusions from this FSA and the Code

104.4.1 The following shall not fall within the definition of Case Review, and will not fall under the Code:

a. Medical and pathological evidence

104.5 Accreditation, Certification, and/or Compliance Required

a. Compliance with the Code

105. FSA Definition – Forensic Database Control and Management

105.1 Definition

105.1.1 The operation and administration of national forensic database systems to identify links between forensic relevant data recovered from criminal incidents and persons of interest.

105.1.2 The following activities, subject to the provisions below, shall be considered to be Forensic Database Control and Management.

105.2 Sub-Activities

a. The receipt and acceptance of submitted data.

b. The control, management, quality oversight, and monitoring of data integrity and processing.

c. The storage and searching of data.

d. The control, management, quality oversight, and monitoring of the database system

e. Validation of database software including matching algorithms and provision of validation results.

f. Provision of potential links.

g. The retention/destruction of data.

105.3 Note

105.3.1 Databases that fall within the definition of Forensic Database Control and Management include, but are not limited to:

a. DNA databases:

b. National DNA Database (NDNAD)

i. Intelligence DNA Database (CT)

c. Prüm

d. Y-STR collections

e. Partial DNA profile collections

i. Vulnerable Persons DNA database (VPDD)

ii. Missing Persons DNA Database (MPDD)

iii. DNA Elimination Database (CED) Unsourced Contamination Database

iv. Police Elimination Database (PED)

v. Forensic Service Provider (FSP) Staff Elimination Databases (SED)

f. Firearms Databases:

i. NABIS or equivalent (Ballistic Evidence Analytical and Management Solution (BEAMS))

g. Fingerprint Databases:

i. National Unified Fingerprint Collection

ii. Unidentified Fingerprint Marks Collection

iii. Special Collections (SCORD CT, BLADE MOD and TEDAC Database)

iv. Special Collections (Ad hoc) managed by NCA

v. Special Collections - Missing Persons and Deceased

vi. Fingerprint Elimination Databases

105.3.2 Contamination elimination reference databases are included within the definition of Forensic Database Control and Management, as these databases are used in the processing of data linked to criminal investigation.

105.4 Included in Other FSAs

105.4.1 The following shall not fall within the definition of Forensic Database Control and Management, but are the subject of a different FSA definition:

a. Reference and ground truth databases [Ref]

105.5 Exclusions from this FSA and the Code

105.5.1 The following shall not fall within the definition of Forensic Database Control and Management, and will not fall under the Code:

a. Activity relating to the INTERPOL Database(s).

b. Collections of physical items and/or literature

105.6 Accreditation, Certification, and/or Compliance Required

a. Compliance with the Code

106. FSA Definition – Forensic Reference Database Control and Management

106.1 Definition

106.1.1 The operation and administration of reference and/or ground truth databases used to support the validation of search algorithms, training, and proficiency testing.

106.1.2 The following activities, subject to the provisions below, shall be considered to be Forensic Reference Database Control and Management.

106.2 Sub-Activities

a. The receipt and acceptance of submitted data.

b. The control, management, and quality oversight of reference and/or ground truth databases.

c. The control, management, quality oversight, and monitoring of data integrity and processing.

d. The storage and searching of data.

e. The control, management, quality oversight, and monitoring of the database system

f. Validation of database software including matching algorithms and provision of validation results.

g. Provision of potential forensic links.

h. The retention/destruction of data.

106.3 Note

106.3.1 Databases that fall within the definition of Forensic Reference Database Control and Management include, but are not limited to:

a. National Footwear Reference Collection

b. Fingerprint ground truth databases

c. Allelic Frequency Databases

d. Y-STR Haplotype Database

e. Proficiency Testing Donor Data sets

f. Integrated Ballistics Identification System (IBIS)

106.4 Included in Other FSAs

106.4.1 The following shall not fall within the definition of Forensic Reference Database Control and Management, but are the subject of a different FSA definition:

a. Any dataset that is included in criminal investigations [Ref Forensic Database Control and Management]

106.5 Exclusions from this FSA and the Code

106.5.1 The following shall not fall within the definition of Forensic Reference Database Control and Management, and will not fall under the Code:

a. Collections of physical items and/or literature

106.6 Accreditation, Certification, and/or Compliance Required

a. Compliance with the Code

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