Forensic Science Regulator Impact Assessment

A. Strategic Overview

A.1 Background

The role of the Forensic Science Regulator (FSR) was created in July 2007 under the Royal Prerogative in order to advise HM Government and the Criminal Justice System (CJS) on quality standards in the provision of forensic science. Forensic science covers a wide range of disciplines, such as: fingerprint analysis, DNA profiling, toxicology, ballistics, digital device analysis, and forensic pathology. The FSR is funded by the Home Office but works independently on behalf of the CJS as a whole.

The FSR's regulatory remit only extends across forensic science providers (FSPs) in England and Wales – these are a combination of private FSPs and in-house laboratories for some police forces. Both Scotland and Northern Ireland have their own publicly funded FSPs. They are not under the FSR's remit, but currently co-operate with the FSR on a voluntary basis.

While the current arrangement has provided flexibility, it has restricted the powers available to the FSR. The FSR has no powers to ensure FSPs meet appropriate quality standards (the FSR's Codes of Practice and Conduct[1] are followed on a voluntary basis), to investigate quality issues, to investigate complaints or to require improvement. Levels of compliance with the FSR's Codes of Practice and Conduct vary across the industry: these are typically quite high for 'traditional' disciplines (for example, DNA or fingerprint laboratories), but can be more variable for newer disciplines (for example, digital forensics).

There is a risk to both public confidence in and the overall quality of forensic evidence used in court. In the absence of any statutory powers there are limits on the FSR's ability to enforce standards.

A.2 Groups Affected

Those that wish to provide evidence (**FSPs**) to courts in England and Wales (which currently includes in-house police forensic laboratories and private providers, amongst others) will be required to operate at a high enough standard. This is to ensure that there are no risks of prejudicing proceedings that their evidence is used in. Failure to do so may mean the FSR takes enforcement action against them. Some FSPs may go to court in the case of a serious quality breach.

The FSR will have an increased workload due to the additional duties imposed by legislation arising from this Bill. The FSR may have to take FSPs to court if there is sufficient evidence of a quality breach.

The public benefits from greater trust in the CJS and a reduced likelihood of miscarriages of justice. Participants in the CJS, in particular, benefit from high quality forensic evidence which allows greater certainty in the CJS outcomes.

1 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/880708/Codes_of_Practice_and_Conduct_-_Issue_5.pdf

A.3 Consultation

Within Government

The following government departments and bodies were consulted:

- Home Office.
- Ministry of Justice.
- Ministry of Defence.
- Department for Transport.
- Department for Business, Energy and Industrial Strategy.
- National Police Chiefs Council (NPCC).

Public Consultation

In November 2013, the Government conducted a consultation on whether to give the FSR statutory powers[2]. There were a range of responses from FSPs, police forces, Police and Crime Commissioners (PCCs), legal professionals and universities.

The main outcome of the consultation was that the majority of respondents were in favour of providing the FSR with statutory powers to enforce the Code of Practice. However, issues were raised by a minority of respondents. These included concerns statutory powers:

- could lead to over-regulation which could increase costs and stifle innovation and research.
- might put too much power in the hands of one person.
- might lead to an unfair burden of regulation falling on smaller FSPs.

The consultation also discussed what powers to give the FSR. In addition to the powers proposed in this bill, the power to fine FSPs was considered, but this was not well supported in comparison to responses on other sanctions. The Home Office is not currently considering giving this power to the FSR.

The Government published its Forensic Science Strategy[3] in 2016, which included the commitment to give the FSR statutory enforcement powers. The House of Commons Science and Technology Committee's report[4] on the Strategy supported providing the FSR with these powers.

B. Rationale

Currently, the FSR has no powers (for example, investigation or enforcement powers) to ensure FSPs operate at a suitable level of quality. The FSR can only publish the Code of Practice and encourage FSPs to comply with it (as following the code would ensure a high quality of forensic evidence). However, complying with the code is voluntary and so many FSPs choose not to. In addition, the forensics market is currently

[2] https://www.gov.uk/government/consultations/new-statutory-powers-for-the-forensic-science-regulator

[3] https://www.gov.uk/government/publications/forensic-science-strategy

[4] https://www.parliament.uk/business/committees/committees-a-z/commons-select/science-and-technology-committee/inquiries/parliament-2015/forensic-science-strategy-inquiry-15-16/

changing rapidly. Spending on forensics has fallen. This is partly due to increased competition since the closure of the Forensic Science Service, and the police are being more selective with which evidence they submit for forensic analysis. There has also been pressure to cut costs, and rapid changes in the types of forensic techniques required, such as a greater demand for digital forensics and reduced demand for 'traditional' forensics (such as fingerprints, DNA). Therefore, it is possible that more FSPs will consider not complying with the code in order to save costs.

If FSPs are not carrying out forensic science activities to a sufficiently high-quality standard - such as by following the FSR's Code of Practice - there is a greater risk of a serious quality breach. This could result in miscarriages of justice, lost convictions and decline in public trust in the CJS.

The FSR is currently appointed by Royal Prerogative and is not able to take enforcement action to ensure quality in forensic science without new legislation.

C. Policy Objective

The policy seeks to give the FSR statutory powers to take enforcement action against any FSP that is carrying on a forensic science activity in a way that risks prejudicing the proper conduct of proceedings. When deciding whether to take enforcement action, the FSR will be able to consider any failure by a person to comply with the FSR's Code of Practice. This is in order to encourage FSPs to comply with the Code, and ensure they provide a high quality of forensic evidence to the courts, protecting the integrity of the CJS.

D. Options and Implementation

Option 1 (do nothing) is to leave the FSR as it is, whereby the FSR sets a Code of Practice but complying with it is on a voluntary basis.

Option 2 is to embed the role of the FSR into statute, and additionally provide the FSR with the powers to take enforcement action against FSPs via compliance notices (and to consider failures to comply with the code when considering enforcement action).

Option 2 is the preferred option. Option 1 will not accomplish the Government's policy objective nor help protect the integrity of the CJS.

E. Appraisal (Costs and Benefits)

GENERAL ASSUMPTIONS & DATA

Most of the assumptions are around the costs that FSPs will face in meeting the FSR's Code of Practice. Although the legislation does not itself make adherence to the code mandatory, we would nevertheless expect most FSPs to comply with the code in order to avoid investigations and enforcement procedures against them.

Number and size of FSPs in scope

- The exact number of FSPs is not known as there is no centrally held data. However, the number of FSPs who currently hold United Kingdom Accreditation Service (UKAS) accreditation has been provided by UKAS, with 64 FSPs having accreditation in England and Wales. UKAS have also estimated that 47 of those FSPs currently hold the FSR Codes of Practice accreditation. The Home Office have assumed that those 17 FSPs who have UKAS accreditation, but have yet to gain Codes of Practice accreditation, would do so regardless of this change in legislation.

- Home Office officials with specialist knowledge of the sector estimate that there may be between 90 and 190 FSPs working in the sector. Public sector FSPs in the market are thought to range between 33 and 65, with a best estimate of 49, while private sector FSPs are thought to range between 60 and 125, with a best estimate of 93, These ranges represent a best estimate based on Home Office knowledge of the sector and reflect the degree of uncertainty about the number of FSPs that might be involved.

- It is unclear what proportions of the 64 FSPs that already have accreditation are public or private, therefore, it has been estimated that the lower bound estimate of public FSPs are accredited, and that the remaining FSPs are private.

- Therefore, the number of public FSPs expected to be affected by this legislation, i.e. those FSPs in the sector which are not currently accredited, is between 0 and 32, with a central estimate of 16. The corresponding number of private FSPs expected to be affected is between 29 and 94, with a central estimate of 62. Table 1 illustrates the estimated numbers of FSPs expected to be affected by this legislation.

- Home Office knowledge of the market has also been used to estimate the number of micro, small, and medium to large scale FSPs. However, there is a high degree of uncertainty regarding these estimates due to lack of data. It has been estimated that there are between 50 and 100 micro FSPs, with a best estimate of 75, between 30 and 60 small FSPs, with a best estimate of 45, and between 13 to 30 medium-to large-scale FSPs, with a best estimate of 22. The lower bound estimates of the medium to large and small FSPs have been assumed as being accredited, with the balance being micro-FSPs.

- On this basis, the number of micro firms estimated to be impacted ranges between 29 and 79, with a best estimate of 54. Small firms range between 0 and 30, with a best estimate of 15. While medium to large firms range between 0 and 17, with a best estimate of 9. These variations are presented in the low, central and high NPV estimates and reflect the lack of data on the number of firms in the market, as well as their size.

- The best estimate of the number of firms who which do not currently have accreditation is 78. However, because of rapid market turnover and a lack of full information about the market for defence forensics, the estimated total number of firms impacted varies between 29 and 126.

- The range around these estimates has been provided to reflect their uncertainty. These variations are presented in the low, central and high NPV estimates and account for the lack of data on the number of FSPs in the market, as well as their size. This is combined with sensitivity analysis carried out for other assumptions used in the appraisal.

Table 1: Number of FSP's Impacted

	Micro	Small	Medium / Large	Total
Public (Lower)	0	0	0	0
Public (Higher)	0	30	2	32
Public (Best)	**0**	**15**	**1**	**16**
Private (Lower)	29	0	0	29
Private (Higher)	79	0	15	94
Private (Best)	**54**	**0**	**8**	**62**
Total (Lower)	29	0	0	29
Total (Higher)	79	30	17	126
Total (Best)	**54**	**15**	**9**	**78**

Source: Home Office Estimates, 2021

Compliance rates

- Some FSPs will now decide to meet the Code of Practice set by the FSR, but exact numbers are not known. Home Office knowledge of the sector has been used to generate estimates of the proportion of FSPs that will become compliant to be between 50 and 90 per cent, with a best estimate of 70 per cent. FSPs remaining non-compliant face no additional costs.

- These could overestimate the costs, but as the majority of FSPs expected to be impacted are private, micro-businesses, there is very little information available on their behaviour.

Costs of gaining accreditation

- It is assumed that all laboratories that get accredited will do so in the first year of the policy. This will ensure they are operating to a high-quality standard and will minimize the chances that the FSR takes any enforcement action against them. The first year of the policy is therefore expected to be the period when currently non-accredited FSPs will make sure they are meeting the Code of Practice, and thus face the most costs.

- The costs of gaining accreditation have been estimated using a combination of figures provided by UKAS (see Annex 1) and Home Office estimates using information supplied by UKAS. It is assumed the estimated provide a reasonable assessment of the average cost to FSPs of different sizes.

- Micro-FSPs are assumed to face the accreditation costs provided for a small laboratory and medium/large FSPs the accreditation costs set out for a large laboratory. Given the absence of data on the breakdown of size it has been assumed that small FSPs face the average of the small and large laboratory costs as their costs of gaining accreditation.

- FSPs currently pay UKAS a fee for the first three years after accreditation and then pay a higher fee in the fourth year to regain accreditation. It has been assumed that this cycle repeats in the subsequent years This means that the same fee is charged for years five to seven, and then reaccreditation is sought in the eighth year, with the higher fee paid.

Costs of complying with standards

- It has been assumed that all FSPs which are not compliant face significant additional costs in order to become compliant. It is assumed that they have no existing quality management system in place already, and so face all the costs of establishing one. This assumption may overestimate the costs faced by FSPs.

- The costs of reaching a compliant standard are primarily taken from a consultation exercise undertaken with police forces in 2012/13. These figures have been up-rated using GDP deflators (to 2020/21 prices). These costs are assumed to apply to private sector FSPs. This is a reasonable assumption as the variations in cost estimates are primarily related to laboratory size. Providing the estimates are appropriately scaled to reflect size, they should provide a reasonable estimate of the aggregate cost to private sector FSPs.

- Based on Home Office knowledge, it is assumed that the costs of developing a quality management system and a standard of practice, the purchase of a physical copy of the standard, and validation costs are all one off, so are only faced in the first year. The costs of the internal audit and the quality manager are assumed to be ongoing. The costs of a quality manager have been adjusted by 21.8 per cent to account for non-wage costs.[5]

- The ongoing costs are assumed not to decrease over time. For example, it is assumed that the time dedicated to quality management does not decrease with greater experience.

Costs to the FSR

- FSR costs are calculated from internal estimates of the extra workload generated and from internal pay cost statistics for Home Office staff. The additional staffing requirement is estimated at one additional Grade 7, one additional Senior Executive Officer, two additional Higher Executive Officers, one additional Executive Officer and one additional Administrative Officer using Home Office pay scales.

- Costs to the FSR are not assumed to vary with FSPs' rates of non-compliance.

Costs of a trial

- Where the FSR takes an FSP to court, the legal costs will be shared between the FSR and the FSP. Depending on the outcome, the costs will fall more on the losing party. Home Office information suggests that the losing party will pay around 70 per cent of the other's legal fees.

- The assumed assessment of the likely outcome in cases is that the FSR is successful. It is unlikely that the FSR will take FSPs to court unless there is enough evidence to support their case, and thus they would be expected to win. The higher and lower estimates reflect that there is some uncertainty around the outcome.

[5] [5] Using ASHE Home Office data, Eurostat (2021) Non-wage labour costs, February, see http://ec.europa.eu/eurostat/statistics-explained/index.php/Hourly_labour_costs and http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=lc_lci_lev&lang=en

- Using internal information, the expectation is that there will be between one and two incidents every three to four years at a cost to each party of between £75,000 and £100,000. This gives a range of total legal costs between £150,000 and £200,000.

- It is assumed that the likelihood of going to court does not vary with FSP size. There is no evidence to suggest a causal relationship between FSP size and likelihood of forensic quality failures.

- No attempt has been made to model the characteristics of FSPs that do not meet the code of practice and which are more likely to go to court. By providing a range in the number of trials per year, some attempt has been made to capture the uncertainty around the level of enforcement activity.

Other assumptions

- For all monetised estimates, a discount rate of 3.5 per cent is used to estimate present and net present values (see HM Treasury Green Book[6]). The appraisal is over a ten-year period.

- For all costs, it has been assumed that they will start in the third year (2022/23) of the ten-year (2020/21-2029/30) appraisal period. When referring to costs incurred in the 'first-year, this is in reference to the first-year of costs in 2022/23.

- All costs are expressed in 2020/21 prices.

OPTION 1 – Do nothing, let the FSR continue as before

There are no additional costs and benefits to the baseline associated with the do-nothing option.

OPTION 2 – Embed the FSR in Statute, provide additional powers for enforcement

COSTS

The majority of costs fall to FSPs and the FSR. There is also a general cost to society of legal fees which will be shared between the FSR and some FSPs.

The FSPs impacted are those who would not have begun operating to an appropriate quality standard (the FSR's Code of Practice) were this legislation not put into effect, and those who are issued with enforcement and improvement notices. The main costs they face are reaching an appropriate quality standard, and the costs of maintaining it.

SET UP COSTS

1. UKAS accreditation

FSPs are expected to seek accreditation with UKAS in the first year of this policy. In order to become accredited, they will have to pay the formal fees charged by the UKAS for both the UKAS and Code of Practice accreditation.

[6] https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-governent/the-green-book-2020

The best estimate of the number of FSPs in each size band is multiplied by the expected accreditation fees in order to calculate the estimated total cost of UKAS accreditation fees in the first year. The best estimate for the first-year cost of accreditation per FSP) is £22,834 for micro-FSPs, £29,541 for small FSPs and £36,248 for medium and large-scale FSPs (using information set out in Annex 1 and assumptions outlined above in '*Costs of gaining accreditation'*).

Using the assumptions previously set out on the number of FSPs impacted and the compliance rate, the set-up costs for gaining accreditation are estimated to be **£1.3 million,** within a range of **£0.3 to £2.8 million**. Private sector FSPs bear £1.0 million of these costs, within a range of £0.3 to £2.1 million. Public sector FSPs bear £0.3 million of these costs, within a range of £0 to £0.7 million.

2. Reaching a compliant standard

In the first-year some FSPs also face the costs of attaining the required standard, under the assumption that they are entirely non-compliant with the Code of Practice. This is likely to over-estimate the total cost as some FSPs may not have sought formal accreditation but nonetheless have in place processes that sufficiently meet the standard of practice.

In the first-year FSPs potentially incur one-off costs of developing a quality management system and a standard of practice, and for validating the new standards. A range of unit costs were provided in a consultation with police forces and then adjusted to 2020/21 prices (see Annex 2). The best estimate for the sum of these costs is £15,431, within a range of £8,250 and £22,612. There is also a one-off fixed cost of buying the required standard from the British Standards Institute of £218.

Using the assumptions previously set out on the number of FSPs impacted and the compliance rate, the set-up costs for reaching a compliant standard are estimated to be **£0.8 million,** within a range of **£0.2 to £1.9 million**. Private sector FSPs bear £0.6 million of these costs, within a range of £0.2 to £1.4 million. Public sector FSPs bear £0.2 million of these costs, within a range of £0 to £0.5 million.

Total Set Up Costs

In total, the set-up costs are **£2.1 million**, within a range of **£0.5 to £4.7 million**. Private sector FSPs bear £1.7 million of these costs, within a range of £0.5 to £3.5 million. Public sector FSPs bear £0.4 million of these costs, within a range of £0 to £1.2 million. Ranges are driven by the number of FSPs and the mix between micro, small and medium to large FSPs.

ONGOING COSTS

3. UKAS fees

In order to maintain UKAS accreditation FSPs must pay an annual fee to UKAS. In years one to three the cost of this doesn't change. In year four, FSPs must pay a higher fee than the previous three years in order to gain reaccreditation. It has been assumed that this repeats on a four-year cycle. A micro FSP pays £8,646 for three years, then £12,862 to renew accreditation. For small FSPs, the figures are estimated at £12,496 and £17,185, and for medium and large FSPs, they are estimated at £16,345 and

£21,508 (see Annex 1). These costs are estimates based on average FSP size but will vary by actual FSP size.

Once again, the number of FSPs of each size was multiplied by their estimated accreditation fees according to the same method as before and the compliance rates were applied. This gives a best estimate of the total present value of the cost of maintaining accreditation of **£3.4 million (PV),** within a range of £0.8 to £7.3 million (PV), over the years following the first year of accreditation. For private sector FSPs the estimated present value of the cost over the appraisal period is **£2.7 million (PV**), within a range of £0.8 to £5.4 million (PV), and for public sector FSPs it is **£0.7 million (PV),** within a range of £0 and £1.8 million (PV).

4. Maintaining accreditation

There are the ongoing costs of performing an internal audit and the labour costs of attaining the required standard (here modelled as a salary paid to a quality manager). These estimates are partially derived from the force consultation and partially from internal discussions. The annual cost of a quality manager is based on an annual salary of £25,000 to £30,000 plus 21.8 per cent on-costs[7]. This is then scaled according to FSP size. Because the quantity of work is related to the size of FSP, it was assumed that a micro-FSP would only spend 0.5 to 1.25 working days per week on quality management. Equivalent figures for a small FSP were 1.5 to 2.5 working days and 4 to 5 working days for a large FSP. In a micro-FSP this is more likely to represent the extra working hours of someone who must maintain the standard of practice. In a large FSP this may represent a full-time hire. The best estimate for the cost of an internal audit is £3,263, within a range of £2,175 to £4,350 (see Annex 2).

There is a significant degree of uncertainty around the cost to each FSP of attaining the required standard. This results in part due to lack of information about how far each FSP is from compliance with the standard at which they can gain accreditation, and partly from an expectation that it will differ depending on how the FSP currently operates. FSPs operating in different areas (such as road traffic compared to fingerprinting) may well face different total costs of reaching the required standard.

The number of FSPs of each size was multiplied by the associated costs of reaching standard estimates according to the same method as before and the compliance rates were applied. This gives a best estimate of the total present value cost of reaching standards of **£4.9 million** (PV) within a range of £0.5 to £15.1 million (PV). For private sector FSPs the estimated present value of the cost is **£3.9 million** (PV), within a range of £0.5 to £11.3 million (PV), and for public sector FSPs it is **£1.0 million** (PV), within a range of £0 and £3.8 million (PV), over the appraisal period.

5. Legal

In the case where the FSR takes an FSP to court there are related legal expenses. Internal estimates suggest there are one to two incidences every three to four years at a cost of £75,000 to £100,000 for each party (the FSR and the FSP).

[7] Using ASHE Home Office data, Eurostat (2017) Non-wage labour costs, April, see http://ec.europa.eu/eurostat/statistics-explained/index.php/Hourly_labour_costs and http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=lc_lci_lev&lang=en

This gives a range of costs from £37,500 per year[8] to £140,000 per year[9]. The best estimate of the cost is the midpoint, £88,750, as there is no mechanism for assessing which is more likely. The cost burden depends on the verdict of the trial. Internal estimates suggest that the losing party will pay around 85 per cent of the total fees (100% of their own and 70% of the other party's). Given that the FSR is likely to take cases to court only when there is clear evidence of wrongdoing, the best estimate of the outcome is that the FSR wins the case, thus these costs will likely fall primarily on FSPs. Costs provided here assume that the FSR wins the case and should therefore be considered as the upper estimate of the costs faced by FSPs.

The best estimate of the costs of legal proceedings is given by multiplying the expected number of incidences per year (0.475) by the expected total legal costs of £175,000, giving a total cost of £88,750 a year. In the case where the FSR wins, this gives an estimated cost to FSPs each year of around £60,000 a year. This represents a total cost to FSPs of **£0.4 million (PV),** within a range of £0.2 to £0.7 million (PV), over the appraisal period**.** Assuming private sector FSPs are no more or less likely than public sector FSPs to be taken to court, this represents a cost of around **£0.3 million (PV)** to the private sector, within a range of £0.1 and £0.5 million (PV), and **£0.1 million (PV)** to the public sector, within a range of £0.1 to £0.2 million (PV), over the appraisal period. This will not be distributed evenly across all private sector FSPs but instead represents a burden only to those FSPs who go to court. The best estimate of the present value of the legal costs faced by the FSR is **£0.2 million** (PV), within a range of £0.1 to £0.3 million.

Legal cost estimates are based on Home Office experience from previous legislation. As this regulation grants the FSR new powers to regulate previously unregulated FSPs, the exact number and cost of future legal proceedings is unknown. As a result, a range of scenarios is provided. These two ranges give an overall best estimate of total legal costs of **£0.6 million (PV),** within a range of £0.2 to £0.9 million (PV).

6. FSR related

The FSR will have a higher workload as a result of the legislation. For example, there is an increased workload from a higher number of investigations or from sending letters to FSPs. Internal estimates have been calculated for the expected impact of this extra workload. The additional staffing requirement is estimated at one additional Grade 7, one additional Senior Executive Officer, two additional Higher Executive Officers, one additional Executive Officer and one additional Administrative Officer. Taking the total pay cost from the relevant Home Office salary bands gives a best estimate of the total present value cost of **£2.2 million (PV)** over ten years. As the FSR is part of the Home Office, this is a cost to the public sector and there is only one estimate due to greater certainty in the estimates

Total On-Going Costs

In total, the on-going costs are **£11.0 million**, within a range of **£3.6 to £25.4 million**. Private sector FSPs bear £6.8 million of these costs, within a range of £1.3 to £17.2 million. Public sector FSPs bear £4.2 million of these costs, within a range of £2.3 to £8.3 million.

[8] 1 incident every 4 years, each party with costs of £75,000

[9] 2 incidences every 3 years, each party with costs of £100,000

WIDER COSTS to the ECONOMY

Costs apply only to the public and private sectors.

Net Cost

The total Net Present Cost over the appraisal period is £13.1 million (PV), within a range of £4.1 to £30.1 million (PV). Private sector FSPs bear £8.5 million of these costs, within a range of £1.8 to £20.6 million. Public sector FSPs bear £4.6 million of these costs, within a range of £2.3 to £9.5 million.

Non monetised costs

All costs have been monetised.

BENEFITS

Monetised Benefits

The benefits for this measure have not been monetised.

Non monetised benefits

Benefits to FSPs

Some of the practices that FSPs will implement to meet the Code of Practice[10] set by the FSR can be seen as best practice for FSPs regardless of the policy change. For instance, clear documentation of processes to help maintain FSP continuity is initially burdensome but may help FSPs avoid future costs. Other processes that are set out in the Code are beneficial for FSPs to implement whether or not they are required and are expected to help FSPs function more effectively. Although spending extra time and resources on additional documentation and validation represents initial costs, as FSPs get used to the new standards, effective documentation and audit may reduce duplication of effort and reduce ineffective processes. If forensic evidence is ever challenged or questioned, there are also benefits from the provision of clear and comprehensive documentation, as queries can be answered more quickly.

There may be further benefits to FSPs from higher levels of confidence in their processes, such as fewer challenges to the quality of the forensic evidence provided. In the case where the FSR identifies a serious problem, the resulting investigation may also help the FSP improve their processes and restore faith in the work of the organisation.

Benefits to the Criminal Justice System

There are potential benefits to the Criminal Justice System and in particular to HM Courts and Tribunals Service.

[10] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/651966/100_-_2017_10_09_-_The_Codes_of_Practice_and_Conduct_-_Issue_4_final_web_web_pdf__2_.pdf

There is no data on how many miscarriages of justice have resulted from the provision of poor-quality forensic evidence, although there are some high-profile examples[11]. The FSR can currently only investigate compliant FSPs so these data are not always published. It is also difficult to know when miscarriages of justice have taken place. It is also not possible to provide an estimate for how many forensic evidence quality failures would be prevented by this policy due to a similar absence of data. However, there is an expectation that the FSR's statutory powers would lead to a reduction, due to both prevention and intervention on the part of the FSR.

If a mistake in forensic evidence is identified early on, for example, before going to trial, this represents a small cost to the FSP of retesting the evidence. However, without oversight an error may not be corrected at this stage. If identified at a later point the costs of re-testing may be higher, for example if samples have been lost or destroyed. There have been several cases of FSPs having to retest thousands of samples. For instance, the NPCC identified more than 10,000 cases across 42 force areas that may have to be retested as a result of data manipulation by Randox Testing Services[12]. Whilst the details of such cases are commercially sensitive, industry experts have suggested that the costs for this could run into millions of pounds. Only a few such cases would have to be prevented within ten years for the costs of the policy to be recouped and the net value of this policy to be positive.

On top of the costs of paying another FSP to retest samples there are the costs of paying staff to review cases rather than doing other paid work, the cost of transferring contracts and samples to other suppliers, and the cost of supporting the work done by the police and CPS in reviewing all of the cases. All this means that by preventing a handful of cases this policy will likely have a net benefit.

A quality failure in evidence may also lead to the collapse of a trial or cause a re-trial. Where forensic evidence failure results in a re-trial, the CJS faces this cost a second time.

There are also costs that result from a miscarriage of justice due to forensic evidence failures. As well as the monetary cost of keeping someone in prison there is also a cost to the defendant who is wrongly imprisoned. If the defendant sues for damages this may also represent an additional cost to society.

There may also be costs from a guilty defendant being found innocent. For example, if that defendant subsequently commits a crime, society faces the economic and social costs of that crime.

Benefits to the Public

The public benefits from maintaining confidence in the forensic evidence used within the CJS.

NPV, BNPV and EANCB

The Net Present Value (NPV) is **-£13.1 million** (PV) within a range of -£4.1 to -£30.1 million (PV), over the appraisal period.

The Business NPV (BNPV) is **-£8.5 million** (PV) within a range of -£1.8 to -£20.6 million (PV), over the appraisal period.

[11] https://www.bbc.co.uk/news/uk-england-manchester-46466710

[12] https://news.npcc.police.uk/releases/national-operation-to-retest-manipulated-forensic-samples-is-progressing-at-pace

The Estimated Annual Net Direct Cost to Business (EANDCB) is **£1.0 million** (PV) within a range of £0.2 to £2.4 million (PV), over the appraisal period.

F. Proportionality

This section is covered for all measures in the overarching IA

G. Risks

OPTION 1 – Do nothing, let the FSR continue as before.

There is a risk that without statutory enforcement voluntary compliance may begin to slip. This could mean that all FSPs may be inclined to produce sub-standard forensics. This in turn could lead to an increase in the number of lost convictions or miscarriages of justice from below standard forensic evidence. As non-compliant FSPs would be able to cut costs this could put a cost pressure on the market to produce the lowest possible quality evidence. These developments could in turn result in a loss of confidence in the use of forensics in the CJS, and an overall reduction in public confidence in the administration of justice.

OPTION 2 – Embed the FSR in Statute, provide additional powers for enforcement

There is a risk that the FSR will produce a Code of Practice that is inappropriately stringent and puts too high a burden on FSPs and will attempt to take enforcement action based on these unreasonably stringent standards. For example, the costs of attaining the required standard could be so high that FSPs struggle to meet them. It is believed that this will be unlikely – the FSR is required to consult with FSPs before updating the Code of Practice and there will be parliamentary scrutiny of any updates.

There is also a risk that as UKAS face a higher volume of work they will raise the costs of accreditation. This would represent an additional cost for FSPs that are not yet accredited but may also affect those who are already accredited if the costs for reassessment increase. Were this risk to materialise, it may be more likely that FSPs maintain and demonstrate their compliance in-house, without formal UKAS accreditation, although this is unlikely due to FSR scrutiny.

There is a risk that FSPs will pass the costs onto those who commission forensic services. These costs would mainly fall on the police, the Legal Aid Agency and the Crown Prosecution Service. This would likely be passed on in the form of increased prices for forensic services. This may in turn lead to a reduced demand for forensic services. This is a possibility as internal knowledge suggests that profit margins of FSPs are low and that this increased burden could result in price increases to make up for the shortfall. For Legal Aid cases, where there are caps on rates for forensic experts, there could be a reduced supply of forensic services.

There is a risk that if costs increase, FSPs will reduce the time and resources they spend on research which would slow the development of new or improved forensic techniques.

The forensic science market is subject to change and there may be big adjustments in the number of FSPs. This could mean that the number of FSPs impacted could

increase. The use of a range to estimate the number of FSPs in scope helps to account for the degree of uncertainty around the final cost estimates.

There is uncertainty around how many FSPs will change their behaviour to meet the Code of Practice. Whilst it is expected that most FSPs will comply with the Code to avoid enforcement, low profit margins may instead encourage some FSPs to risk being enforced against. This would reduce the expected benefits from FSPs meeting the code of practice. This risk is reflected in the varying compliance rates in the cost estimate ranges, with 70 per cent reflecting the best estimate and the range of 50 to 90 per cent reflecting the possible difference in behaviour. There is a further risk that different sized firms may change their behaviour because of their size, therefore meaning each sized firm has varying compliance rates, but due to the lack of data compliance rates have been applied across all firms.

There is a risk that costs are over-estimated as it is assumed that FSPs face all the stated costs of complying with the required standard. If FSPs are already close to the compliant standard, they may not face all the costs of reaching the standard beyond the formal accreditation costs. This is reflected in the range of costs for reaching standard.

There may be concerns about using cost figures from 2012/13 rather than more recent figures. Up-rating the costs in line with inflation should counteract this to some extent and there is little reason to believe the costs taken from 2012/13 have changed markedly beyond inflation.

Finally, there is a high degree of uncertainty in the data used to estimate the proportion of FSPs by size. The estimates have been generated from a combination of Home Office expert opinion and data from UKAS. However, the lack of data on FSPs not yet accredited does create uncertainty in the precision of the estimate. Calculating estimates for a range of FSPs impacted, has sought to mitigate this issue, but FSP numbers, and therefore costs, may be over or under estimated.

Sensitivity Analysis

As outlined above, each area of uncertainty has been reflected in the low and high estimates throughout the appraisal and for each cost element, where estimates are appropriate. However, one of the key elements that may vary more than tested in the core ranges is the compliance rates. Currently, the best estimate for compliance rates is 70 per cent, with the NPV totalling -£13.1 million. However, if the best estimate were to fall to 50 per cent, the best estimate NPV would fall to -£10.1 million. It is extremely uncertain how many FSPs will comply and if the compliance rates will vary by FSP size, but as the majority of FSPs (70%) expected to be affected are micro, it is likely that the majority of businesses will change their compliance at the same rate as micro FSPs.

H. Direct costs and benefits to business calculations

The Business NPV (BNPV) is **-£8.5 million** (PV) within a range of -£1.8 to -£20.6 million (PV), over the appraisal period.

The Estimated Annual Net Direct Cost to Business (EANDCB) is **£1.0 million** (PV) within a range of £0.2 to £2.4 million (PV), over the appraisal period.

I. Wider Impacts

Small and Micro Business Assessment (SaMBA)

The overall cost to businesses is expected to fall primarily on small and micro businesses. It is estimated that 62 Private FSPs will be affected, within a range of 29 and 94. Of these, it is estimated that 54 are small and micro businesses, within a range of 29 and 79. For the central estimate, this means that 88% of Private businesses estimated to be impacted are small or micro. However, due to lack of data on both the number and size of firms in the market and the size of firms which already have accreditation, this proportion may be an under or overestimate.

This policy primarily burdens small and micro-businesses and would not be an effective policy if it contained an exception for small and micro-businesses. There is reason to believe that the majority of FSPs currently operating below the required standard are small and micro in size so this policy will primarily affect them.

Small and micro-businesses may be disproportionately burdened if there are many fixed costs. This is because the fixed cost will represent a larger proportion of their overall expenditure than it will for larger firms. However, as noted above, the relevant costs mostly scale according to business size. The estimates provided are often based on averages (such as the UKAS accreditation fees and Code of Practice accreditation fees) which are representative of a typical case rather than being fixed costs, and there is an expectation for these costs to scale to some extent with business size. This means that small and micro-businesses are unlikely to be disproportionately burdened by fixed costs.

One significant fixed cost that could burden micro and small businesses disproportionately is the cost of going to trial. This cost is not expected to vary much with firm size. However, this is less likely to be a problem as these costs are only incurred in the case of a serious quality breach and this is exactly what the legislation is trying to prevent. Also, this is a cost incurred for non-compliant activity and would not be counted towards the cost of introducing the policy, given the business could have avoided the cost of going to court by being compliant.

Of the overall costs to private businesses estimated, 70 per cent are estimated to fall on small and micro-businesses, within a range of 66 to 100 per cent. Small and micro-businesses face a lower proportion of their total cost than would be expected from their market share of 88 per cent, in the best estimates.

J. Trade Impacts

There are no trade impacts for this measure.

K. Monitoring and Evaluation

This section is covered for all measures in the overarching IA.

L. Annexes

Annex 1

Table A1.1, Estimated UKAS Accreditation Costs.

UKAS Accreditation Costs and Code of Practice Accreditation Costs (£, 2020/21)						
	UKAS Accreditation			Code of Practice Accreditation		
Item	Small Testing Lab (Forensic)	Large Testing Lab (Forensic)	Central Estimate	Small Testing Lab (Forensic)	Large Testing Lab (Forensic	Central Estimate
Application Fee	1,500	1,500	1,500	-	-	-
Pre-Assesment Fee	5,280	7,920	6,600	-	-	-
Initial Assessment Fee	9,347	17,481	13,414	6,707	9,347	8,027
Costs Years 1-3 (per year)	6,538	12,129	9,334	2,108	4,216	3,162
Costs of Reassessment (year 4)	7,485	14,023	10,754	5,377	7,485	6,431

Source: Home Office estimates, informed by UKAS, for the year 2020/21

Annex 2

Table A2.1, Costs of attaining the required standard (minus initial accreditation)
Costs of attaining the required standard (minus initial accreditation).

Costs of getting up to standard (minus initial accreditation) (£, 2020/21)				
Item	Lower estimate	Higher estimate	Best guess	Source
Annual Cost of Quality Manager (QM) with on-cost @21.79%	30,448	36,537	33,492	Internal Estimates (2016/17)
Development of QMS (excluding QM)	1,160	3,479	2,319	Force Consultation (2012/13)
Development of SOP (excluding QM)	5,218	15,654	10,436	Force Consultation (2012/13)
Validation Costs	1,873	3,479	2,676	Force Consultation (2012/13)
Internal Auditing	2,175	4,350	3,263	Force Consultation (2012/13) / internal estimates (2016/17),
Cost of Standard	218	218	218	BSI (2021)

Table A2.2, Quality Manager costs per FSP size.

Quality Manager (QM) costs by FSP size (£, 2020/21)							
FSP size	Proportion of week worked (low estimate)	Proportion of week worked (high estimate)	Annual cost of QM (low estimate)	Annual cost of QM (high estimate)	Total cost QM (low estimate)	Total cost QM (high estimate)	Total Cost of a QM (Best Estimate)
Micro	0.1	0.25	30,448	36,537	3,045	9,134	6,090
Small	0.3	0.5	30,448	36,537	9,134	18,269	13,701
Medium/Large	0.8	1	30,448	36,537	24,358	36,537	30,448