



# FORENSIC SCIENCE NORTHERN IRELAND

February 2014

Criminal Justice Inspection  
Northern Ireland  
*a better justice system for all*





# Forensic Science Northern Ireland

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## List of abbreviations

<b>ACC</b>	Assistant Chief Constable
<b>CJI</b>	Criminal Justice Inspection Northern Ireland
<b>CSI</b>	Crime Scene Investigator
<b>DNA</b>	Deoxyribonucleic acid
<b>DoJ</b>	Department of Justice
<b>ERU</b>	Evidence Recovery Unit
<b>FAU</b>	Forensic Authorisation Unit
<b>FDD</b>	Forensic Delivery Docket
<b>FSNI</b>	Forensic Science Northern Ireland
<b>HET</b>	Historical Enquiries Team
<b>MIS</b>	Management Information System
<b>NICTS</b>	Northern Ireland Courts and Tribunals Service
<b>PPS</b>	Public Prosecution Service for Northern Ireland
<b>PSNI</b>	Police Service of Northern Ireland
<b>SMART</b>	Specific, Measurable, Attainable, Relevant and Time Bound
<b>UKAS</b>	United Kingdom Accreditation Service



# Chief Inspector's Foreword

Forensic Science has become an essential source of primary and secondary evidence in criminal prosecution cases. In addition, it can provide answers to sudden and suspicious deaths, and in doing so supports the work of pathologists and coroners. Therefore the quality of the science and its analysis must be beyond reproach if public and stakeholder confidence is to be retained.

This is the second time in four years that Criminal Justice Inspection Northern Ireland (CJI) has completed a full inspection of Forensic Science Northern Ireland (FSNI). The report concludes that the quality of the science has been maintained. While we welcome the progress that has been made to reform the organisation, we are disappointed that the issues of timeliness of reports, managing customer relationships and performance improvement still represent significant challenges for the future.

FSNI cannot operate in a vacuum and must be alert to current developments in this fast moving field, and since they enjoy the position of being the sole local provider, they must be able to reassure customers that they are delivering value for money. This is particularly relevant when you consider that reported crime is at its lowest level in recent years, terrorist activity has reduced significantly, and this society continues to normalise.

The report identifies a number of multi-faceted problems that have inhibited performance

improvement, some of which are not entirely within the gift of FSNI to resolve. Inspectors have made a small number of recommendations designed to support the redefinition of what the criminal justice system wants and can pay for from FSNI, and how that should be delivered in light of the current economic reality.

This inspection was led by James Corrigan and supported by Derek Williamson from CJI. Specialist assistance was provided by Dr Chris Maguire and Robert Green OBE. My sincere thanks to all who have contributed to this work.

**Brendan McGuigan**  
Chief Inspector of Criminal Justice  
in Northern Ireland

February 2014



# Executive Summary

Making improvements in forensic science will require better management of demand from customers such as the police, together with increased productivity and additional capacity from FSNI. A new criminal justice strategy, aligned with the agency's Transformation Programme (including the new laboratory facilities, case management system, DNA upgrade and process improvements), provides the opportunity to speed up justice, achieve better value for money and build upon the quality of the science.

At the time of the last CJI report on FSNI in 2009, the Northern Ireland Office (which had responsibility for criminal justice prior to the devolution of justice) and FSNI management were re-assessing whether FSNI would be part of the commercial marketplace or remain within the public sector and outside the competitive procurement arrangements as then applied in England and Wales.

Since devolution, the approach adopted by the Department of Justice (DoJ) and the criminal justice agencies in Northern Ireland has been to strengthen the position of FSNI as the sole (public sector) local provider of forensic science. The Police Service of Northern Ireland (PSNI) confirmed that FSNI would be their first choice provider and that they would only seek to access forensic services elsewhere if FSNI did not have the capability or capacity to provide them,

or if FSNI was excessively expensive. This public sector model mirrors the strategic approach taken by Scotland and the Republic of Ireland where the respective forensic science laboratories are the primary providers of forensic science to the police and to other criminal justice customers.

At the same time, the PSNI, like its counterparts in neighbouring jurisdictions, has continued to invest in an in-house Scientific Support Services branch which is crime scene focused and includes all Crime Scene Investigators (CSI) specialising in functions such as fingerprints and imaging.

The combination of forensic science together with police scientific support is collectively known as forensic services. The total spend on forensic services was approximately £20 million in 2012-13 (£9.7m of



the PSNI's £18m budget was paid to FSNI). The DoJ, in addition to its sponsorship of FSNI, has also committed a £15m capital budget towards the development of a new laboratory and continues to financially support the strengthening of corporate governance and business transformation initiatives in FSNI.

The core business of FSNI is its scientific analysis and reporting. FSNI has provided a wide range of services from crime scene to court which includes about 9,000 reports on 6,000 cases per year, which in turn has been based on an analysis of approximately 20,000 exhibits. The FSNI quality management system has been externally accredited by the United Kingdom Accreditation Service (UKAS). There is also an assurance from its customers and the courts that the quality of its services (for example, advice) and products (for example, reports) have been good. Sustaining these standards and level of satisfaction has been a notable achievement.

The CJI inspection report in 2009 found that the agency had emerged from a period of instability and that a range of measures were required to drive the necessary changes in areas such as improving the timeliness of reports, managing customer relationships and promoting performance improvement through operational and cultural changes within the laboratory. An assessment of progress against the 12 CJI recommendations has found some improvements but that considerable work is still required. It is the view of Inspectors that the required level of performance improvement will still require some fundamental changes to how forensic services in general are delivered, as well as specific changes within the laboratory.

This report reaffirms the importance of a more collaborative criminal justice approach to the development of forensic services and to FSNI in particular. This includes the need for a shared understanding and approach to the priorities, a means of delivery and stated benefits of forensic services. Inspectors reaffirm the benefits of producing a criminal justice strategy for forensic services which should be linked with justice

sector priorities such as faster, fairer justice.

The strategy should also reflect FSNI performance indicators/targets which need to be more outcome-focused and structured around measuring the value and impact of forensic science to the wider criminal justice system.

The establishment of an inter-agency Forensic Science Strategy Group, chaired by the DoJ, together with the decision to develop a strategy have been positive steps. It also presents an opportunity to consider the model of how forensic services should be delivered, including the most appropriate funding arrangements. Without going down the radical transformation approach of the commercial marketplace, as applied in England and Wales, there are two alternative options. The first is a centralised funding model, possibly through the DoJ, which would coordinate the various funding streams for forensic services and bring more cohesive oversight on delivery and measurement of outcomes. This would closely resemble the revised governance and funding model established in Scotland and be in line with the public sector approach to forensic science in the Republic of Ireland.

A second approach, which is used in New Zealand, is to introduce a hybrid of the public sector and commercial models in which the delivery of forensic services continues to be undertaken by public bodies (FSNI and the PSNI), but also adopting some of the disciplines of the commercial marketplace. This could include customer relationships based on transaction charging for FSNI services and products. Inspectors accept that at least initially, this could be notional transactional charging with each customer having the ability to breakdown their forensic science costs. This would represent a move away from the block invoices and inflexible budgets that currently exist between FSNI and its main customers. The introduction of (notional) transactional charging would also be an opportunity for the PSNI to implement devolved forensic science budgets for its internal users (for example, district policing and serious crime).

Good corporate governance is a key driver in delivering performance improvement. For FSNI,



this includes the need to continue to streamline its organisational structures with the aim to facilitate effective decision making and reduce its management and administration overheads. The DoJ, together with other Government departments such as Finance and Personnel, can also assist FSNI in reducing any avoidable oversight and monitoring arrangements, which Inspectors have been told has significantly increased in recent years in areas such as procurement and information security.

One of the primary factors impacting on FSNI performance is the mis-match between the projected demands from customers for forensic science and the available and known capacity of the laboratory to meet these requirements. Successive service level agreements between FSNI and its main customers have struggled to align these demands with the ability of the laboratory to deliver the required level of service. This is particularly evident where demand in areas such as drugs and micro-chemistry have exceeded agreed levels of submission, resulting in delays in reporting and negative implications for criminal case progression. The broader solution is two-fold: better projection and management of demand for forensic science by customers such as the PSNI and; improved capacity within the laboratory to undertake a greater volume of work and produce faster laboratory analysis and reporting in line with customer requirements.

The bulk of forensic science demand originates from the PSNI with submitted cases prioritised in the order of national security, serious harm and community confidence – the latter relates to volume crime (for example, burglary) in the main. Managing this demand, within the submission thresholds of a joint service level agreement is a PSNI responsibility. Establishing the submission thresholds has been aided by the introduction of demand modelling based on three-year projections. While such projections (for example, continuing increase in drugs submissions) have been provisional and open to revision, they do provide a better basis for resource planning in both the PSNI and FSNI. Moving forward, Inspectors would expect to see a greater alignment

between customer demand analysis/profiles and projected capacity changes in FSNI. This could be strengthened through the use of devolved forensic science budgets in the PSNI, designed to facilitate a greater level of accountability on how forensic science can be best utilised within the police. There is also scope to review the operation of the PSNI Authorisation Unit, which has responsibility for adherence to the service level agreement with regard to exhibit submissions to the laboratory.

The second challenge, which is the main focus of this report, rests with FSNI in terms of releasing capacity to deal with an increased workload, whilst also retaining the flexibility to deal more effectively with spikes in demand. The evidence from this inspection is that the laboratory has delivered a good service in terms of priority 1 cases (i.e. serious crime) but that performance on various work-streams associated with volume crime cases has been relatively poor, especially when squeezed by high demand levels (for example, drugs) and work on more complex priority 1 cases.

The recent work on lean management, as part of a wider business transformation programme, has produced 20% extra capacity in drugs and led to a significant improvement in performance, particularly for exhibits submitted by the State Pathologist's Department. A replication of this type of process improvement in other parts of the laboratory appears to offer significant potential for additional efficiency gains and should therefore be a priority. Delivering better value for money also requires an ongoing commitment by management to addressing high spending in areas such as the authorisation and use of overtime as well as on-call arrangements.

Inspectors strongly support the ongoing transformation projects and recommend that the agency should be given the flexibility to invest a proportion of its efficiency savings into research and development. Such an innovative approach, as applied in the Netherlands forensic science laboratory, also has the potential to incentivise the agency and its staff towards greater efficiency and

effective delivery of its services. More investment in research and development also has potential in terms of future products and services.

The inspection includes a strategic recommendation on strengthening FSNI capacity, which requires a detailed action plan from the agency in terms of specific plans and delivery arrangements. Inspectors would expect to see tangible results in terms of an increase in the volume of its outputs and flexibility to better respond to the needs of the justice system (for example, providing the appropriate reports when required by the courts). There is also an expectation that the agency should continue to engage with, and be informed by comparative performance with other laboratories (i.e. benchmarking) as a means of identifying areas of best practice as well as scope for improvement (for example, turnaround times, capability, quality and cost of particular products).

The construction of a new section to the laboratory, which will focus on evidence recovery and deoxyribonucleic acid (DNA), will be an opportunity to strengthen the scientific quality and range of products offered by FSNI. It has the potential to deliver added benefits in terms of volume and timeliness of casework. But there is also a risk that this investment will not deliver the projected improvements due to inadequate planning, continued delays in the implementation of a new management information system (i.e. Perseus) and resistance to change among some staff. FSNI, in conjunction with the DoJ have responded by integrating the business transformation initiatives with the new laboratory accommodation project. CJI has recommended that FSNI should ensure that a benefits realisation plan for the new laboratory can clearly demonstrate how the return on this investment can be achieved and how known risks (for example, cultural resistance to change) can be mitigated.

Delivering meaningful and sustained performance improvement will also require the support of the wider criminal justice system. The development of a forensic services strategy and new outcome-focused

performance targets needs to be supported by operational decisions on a range of issues such as the implementation of presumptive testing of drugs, staged (shorter) forensic reports and the roll-out of live video links for the presentation of forensic evidence in court cases. The latter has the potential to significantly reduce the need for forensic scientists to attend court and may also have benefits in terms of case progression. Reducing avoidable delay, which is a priority for the justice system, requires a closer interface with FSNI and the courts (for example, access to court hearing information) to avoid the criticisms of FSNI raised in court on a number of occasions since the last CJI inspection. Part of this problem was due to a lack of information provided to the courts in relation to when cases were submitted to FSNI by the PSNI.



# Recommendations

1

The DoJ, in partnership with the main criminal justice agencies, should complete a strategy for forensic services. The strategy should present options for the funding and integrated delivery of forensic services from crime scene to court (paragraph 2.6).

2

The PSNI should identify and implement arrangements for the effective and efficient management of demand for forensic science (for example, devolved budgets for forensic science) (paragraph 3.12).

3

FSNI should implement a series of actions to increase the capacity of the laboratory to deliver a quantified increase in the volume of outputs and a quantified reduction in avoidable delay. The actions and targets should be set as part of the current business planning cycle (paragraph 3.19).

4

FSNI should ensure that a benefits realisation plan for the new laboratory facilities incorporates change management initiatives, quantify how the return on investment can be realised and include mitigating factors on known risks (paragraph 3.46).

5

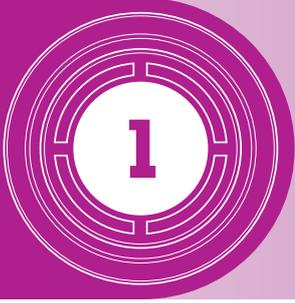
FSNI, in conjunction with the DoJ and its main customers, should implement a plan to allocate a specified proportion of efficiency savings into research and development (paragraph 3.53).

6

FSNI, in conjunction with the criminal justice agencies, should develop a set of performance indicators based on measuring the value of forensic science to the criminal justice system. These should be aligned with the targets in any new forensic services strategy (paragraph 4.14).



# Inspection Report



# Introduction

## Forensic Science Northern Ireland (FSNI)

- 1.1 A forensic science laboratory has operated in Northern Ireland for over 50 years. There has been two major spikes in the demand for forensic science in this period - the first due to the escalation in violence during 'The Troubles' and a second due to the introduction of new technologies, most notably high-tech biometrics (for example, forensic DNA).
- 1.2 The forensic science laboratory was integrated into the Northern Ireland Office as a division in 1976 and later became an executive agency in 1995. By 2002, plans were initiated to position the laboratory for the introduction of a more commercial marketplace in line with developments in England and Wales – this was initially to take the form of Trading Fund status.<sup>1</sup> The participation of FSNI in a competitive procurement market, which operated in England and Wales, remained an option at the time of the last CJI inspection in 2009.
- 1.3 The transfer of the agency to the Northern Ireland Government, as part of the devolution of criminal justice in April 2010, coincided with a commitment by the justice system to maintain a locally-based forensic science laboratory within the public sector. The PSNI also made a commitment that FSNI would continue to be its first choice provider of forensic science and they would only seek to access another provider if FSNI did not have the capability or capacity to meet their requirements. The PSNI did however retain the option to procure services from other providers if FSNI was excessively expensive (taking account of logistics costs and issues of non-local supply). This model of one main customer and one public sector provider of forensic science now contrasts with the multiple private sector providers in England and Wales, and is therefore now more aligned with the single supplier model which operates in Scotland and the Republic of Ireland.
- 1.4 As an executive agency of the DoJ, FSNI has its own Executive Board and Chief Executive. The independence of FSNI's scientific opinion is safeguarded through the operational independence of the Chief Executive from the Minister of Justice and the DoJ in relation to individual cases under investigation or before the courts.

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<sup>1</sup> The Forensic Science Service, as the largest public sector provider of forensic science in England and Wales, became a Trading Fund in 1999. It changed its status from an executive agency to a Government-owned company in 2005. The main benefit of Trading Fund status is to allow greater financial flexibility within a commercial marketplace.

- 1.5 The agency has an annual budget of around £12m and employed 220 staff at the end of March 2013, which included 144 scientists.<sup>2</sup> It is located in Carrickfergus, County Antrim. FSNI operates as a supply financed agency of the DoJ and operates under a net running cost regime. This allows FSNI to increase expenditure in-year, provided it is matched by in-year receipts. It cannot carry forward savings (or deficits) which is a standard norm in most of the public sector, though sometimes acknowledged as an impediment to delivering the maximum level of efficiency savings. The Chief Executive has told Inspectors that he has previously sought to achieve some flexibility in this regard, but accepts that a solution may be outside the control of the DoJ.

## CJI inspection

- 1.6 The first CJI inspection of FSNI was undertaken in 2005 with a second inspection report published in 2009. Both inspections recognised the growing importance of forensic science in the criminal justice system, both as an aid to the investigation and detection of crime, as well as the presentation and interpretation of scientific evidence to the courts.
- 1.7 The 2009 inspection report had 12 recommendations for improvement which included the need for a more strategic and active involvement of the criminal justice agencies in the development and delivery of forensic science. There were also a number of specific operational recommendations aimed at improving the effectiveness and efficiency of FSNI. A summary assessment of progress against each of the recommendations is provided at Appendix 3.
- 1.8 Whilst this inspection is primarily focused on the delivery of forensic science services by FSNI, it is also necessary to consider the broader delivery of forensic services (includes Scientific Support Services in the PSNI which had 200 staff at the time of this inspection). The PSNI, as the largest customer of FSNI, regularly interfaces with the laboratory across a number of functional areas such as finance, service delivery standards, attendance at crime scenes and submissions. Scientific Support Services in the PSNI was also the subject of a CJI inspection report in 2005 and subsequent follow-up reviews in 2007, 2008 and 2009.

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<sup>2</sup> Annual Report and Accounts 2012-13, FSNI, July 2013.



# Strategy and governance

## Strategy

- 2.1 The purpose of FSNI is set out in its corporate mission, vision and goal which is focused around delivering effective and impartial forensic science demonstrated through a timely, integrated and value for money approach. An increasing focus on enabling the integrity and speed of justice has been added since the last CJI inspection.
- 2.2 The strategic priorities of FSNI have been set in the context of significant external change which has continued to impact on FSNI as well as its sponsoring department and criminal justice customers. One of the most important has been the radical overhaul of forensic science delivery in England and Wales, where a mixed model of public and private sector providers has been replaced by a wholly private sector marketplace.<sup>3</sup> This has resulted in a significant shrinking of the outsourced forensic science marketplace.<sup>4</sup> The strategic and delivery model applied by the Northern Ireland criminal justice system and FSNI was for many years based on the approach taken in England and Wales. Inspectors have been told by FSNI management that the introduction of a commercial marketplace in Northern Ireland would be likely to have similar results (for example, private sector providers competing with FSNI; more in-house forensic services done by PSNI). This could lead to an overall reduction in the forensic science marketplace and raise issues regarding the viability of FSNI (in view of the demise of the Forensic Science Service).
- 2.3 Part of the operational model for the provision of forensic services (including forensic science) in England and Wales continues to have a strategic relevance for Northern Ireland. This is most evident in relation to the split between the more specialist science, which is usually undertaken in laboratories, and the scientific support services which most police forces do in-house. This division of responsibilities, where the police pay for specialist advice, particularly crime scene work, laboratory analysis and reporting services in conjunction with doing their own scientific support (for example, crime scene and fingerprints) applies in Northern Ireland as well as England and Wales. The key difference in Northern Ireland is that there is one main (police) customer and one dominant public sector supplier.

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3 The Forensic Science Service in England and Wales was closed by the UK Government in March 2012 citing unsustainable losses of £2 million per month. This followed an injection of £50 million to the Forensic Science Service in 2009 as part of a transformation programme.

4 Research undertaken for the Government and data from private sector forensic science providers all agree that the external marketplace has significantly shrunk. One industry estimate stated that it has fallen from about £200 million to £100 million over a five year period. Police internal expenditure on forensic services has also fallen in recent years though several police forces have made significant investments in the building of their own laboratories and the recruitment of new staff.

- 2.4 The merits of the current delivery model for forensic services should form part of the inter-agency work around the development of a new criminal justice strategy. The last CJI inspection report in 2009 made a recommendation that *'the NIO, in partnership with the main criminal justice agencies, should develop a bespoke criminal justice strategy for forensic science which meets their needs and provides a road map for the future development of FSNI. This should include an organisational model for the agency.'*
- 2.5 The DoJ, as the successor to the Northern Ireland Office, has taken on responsibility for the delivery of this recommendation. Progress since 2009 has been limited, though Inspectors are reassured with recent cross-agency activity initiated by the Forensic Science Strategy Group<sup>5</sup> and the renewed efforts around developing a more integrated approach to the delivery of forensic services. The need for such a strategy is evident from customer satisfactions surveys, conducted in the main criminal justice agencies in 2011, which found that just 11% of customers agreed *'there is a good level of strategic alignment between PSNI, DoJ and FSNI'* thus making it the area of least satisfaction.
- 2.6 It is recommended that **the DoJ, in partnership with the main criminal justice agencies, should complete a strategy for forensic services. The strategy should present options for the funding and integrated delivery of forensic services from crime scene to court.**
- 2.7 The funding of forensic services in Northern Ireland has been police led – the PSNI accounts for over 90% of FSNI revenue, resources its own Scientific Support Services branch and procures additional services from a range of other providers. This is the basis of the model which has applied in England and Wales and led to the development of a commercial marketplace through the introduction of competitive tendering by police forces. It has also contributed to the demise of previously dominant public sector providers of forensic science.
- 2.8 While the largest proportion of FSNI funding comes from the PSNI as its main customer, it also undertakes contracted work for other criminal justice organisations (i.e. State Pathologist's Department, Public Prosecution Service for Northern Ireland (PPS), Northern Ireland Courts and Tribunals Service (NICTS) and the Office of the Police Ombudsman). The DoJ also contributed £1.24m in running costs in 2011-12 and has separately committed a £15m capital budget towards the development of a new laboratory. Almost all of FSNI income comes from the criminal justice organisations.
- 2.9 It is therefore timely to consider the relevance of this funding model for Northern Ireland and whether an alternative approach would yield better results. One approach would be to depart from the police led approach and develop a funding model for the entire criminal justice system. This could involve funding for forensic science or indeed forensic services in general, coming from a central source such as the DoJ. The standard model in many jurisdictions where a forensic science provider is part of the public sector is that funding is centrally provided (generally by a justice department/ministry).
- 2.10 An alternative approach would be to build-upon features of the commercial approach, albeit within a public sector arena. This would not deliver the transformational change as seen in England and Wales, but could produce some meaningful improvements for customers and FSNI. A similar model has been applied in New Zealand, where there is also a single supplier and single client within the public sector. The forensic science supplier is allowed to make and retain a defined 'profit' which is used to fund growth

<sup>5</sup> The Forensic Science Strategy Group comprises representatives from the PSNI, PPS, NICTS and FSNI. It is chaired by the DoJ. The main focus of the group is the development of a forensic services strategy.

and/or research and development. For the FSNI, there would be a clear need to introduce transactional charging, which has been planned for a number of years. Senior finance managers in FSNI have told Inspectors that much of the financial apparatus is already in place in terms of accounting processes.

- 2.11 For the PSNI, the current system of paying block invoices based on an agreed annual budget has contributed to a centralised approach to the management of forensic science. This has benefits in terms of central oversight but has removed the responsibility for financial accountability from the users of the service and may have contributed to over-submissions (i.e. above agreed thresholds) such as drugs. The introduction of notional transactional charging, could provide the PSNI with an opportunity to implement devolved budgets for forensic science (for example, serious crime, district policing) which would allow customers to make informed decisions on the best use and value of their forensic science budgets.<sup>6</sup>
- 2.12 To Inspectors, the current funding model for FSNI would appear to be a hybrid of both approaches, but without the explicit benefits of either. The development of a criminal justice strategy is therefore an opportunity to provide clarity and a means of implementing the most appropriate funding structures going forward.
- 2.13 CJI made a recommendation in 2009 that *'the Chief Executive, in conjunction with the NIO, should review the draft Framework Document to ensure that it helps deliver the corporate objectives of the Agency and address the challenges of a competitive marketplace.'* While the challenge of an impending competitive marketplace has changed since 2009, there remains a need for the agency and its sponsoring department to bilaterally work together to improve the delivery of forensic science. The introduction of any new funding arrangements should be supported by appropriate arrangements between the sponsoring department and agency in areas such as financial flexibility.
- 2.14 CJI made a recommendation in 2009 that *'FSNI should seek to develop, in conjunction with other laboratories (for example, the Republic of Ireland and Scotland) a plan to facilitate increased collaboration including the exchange of staff on secondment.'* The relevance of this recommendation is becoming more evident in light of the divergence from the England and Wales approach and the need to consider and evaluate alternative options in Northern Ireland.
- 2.15 CJI is aware of the evident support for forensic science co-operation by Ministers in all three jurisdictions. Inspector's meetings with the heads of the three laboratories have also demonstrated a clear commitment for increased collaboration. Understanding the reasons why this collaboration has not moved beyond the networking opportunities and sharing of experiences should be of particular interest for the DoJ and its counterparts in Scotland and the Republic of Ireland. Inspectors would note that each of the laboratories have tended to focus on their immediate service delivery challenges (for example, case backlogs, organisational re-structuring, efficiency cuts) and the delivery of internally driven performance targets. The strategic architecture (in the shape of a political strategy or plan) has also not been fully articulated by Government or perhaps more importantly by the key customers or users such as the police. Whilst all three laboratories see the potential benefits of collaboration such as respective specialisation and scope to engage in collaborative research and development, there is also an understandable

<sup>6</sup> Notional charging refers to the process where customers are informed of the charges for services/goods, but no money is actually transferred. Notional charging is sometimes introduced to ensure that customers are aware of the costs they incur, or as a stage during the introduction of real charging.

reticence around the loss of some units and staff. The bigger picture is however one of strengthened forensic science provision including the availability of a broader range of products and services. Inspectors would strongly support the active engagement of Governments, forensic science providers and their customers/users in realising the benefits of their stated commitment to increased collaboration.

- 2.16 A reply to an assembly question in November 2012 stated that a bilateral memorandum of understanding has been established between FSNI and the Scottish Police Services Authority and Forensic Science Ireland respectively. Each memoranda of understanding provides for mutual aid in the event of the loss of facilities or demand surges; the scope for brokering of some excess demand and best practice support on specialist and quality issues. A similar trilateral agreement is also in place between FSNI, Forensic Science Ireland and the Scottish Police Services Authority Forensic Services. A fledgling structure would appear to be in place to plan and implement the next stage of collaboration.
- 2.17 The recent experiences of establishing a unitary approach to forensic services in Scotland is also worthy of greater consideration, especially in the context of establishing a more integrated service from crime scene to court. While FSNI provides a significant input to the examination and collection of evidence at crime scenes, most of the volume work is undertaken by the PSNI, and in particular by Scientific Support staff such as CSIs. This separation of responsibilities has many benefits including the ability to proactively respond to police priorities and to be able to draw upon the specialist and impartial advice of forensic scientists when required. But there are also benefits to a more integrated approach where both parts of the service are brought together under a unitary structure and where common standards and processes are developed. The lack of consistent quality standards, particularly in many police forces in England and Wales, is a particular concern for the Forensic Science Regulator.

## Governance

- 2.18 FSNI is headed by a Chief Executive, who is supported by an Executive Board, Executive Directors, Non-Executive Directors and a Corporate Secretary. The primary responsibility of the Executive Board is to review strategic options, set corporate policy and monitor performance at corporate level to ensure that FSNI delivers its strategic objectives and performance targets. A Management Committee (heads of sections and team managers) supports the Executive Board and other operational structures.
- 2.19 CJI Inspectors had previously heard a view in 2009 that FSNI had a risk of *'over-management'* in terms of the level of resources devoted to governance and management/administration. The view was repeated within and outside FSNI during this inspection. Data provided by FSNI shows that the management overhead within the agency (i.e. management and administration) in FSNI was calculated at 17% of staff in September 2012. This does not however include an additional 17% of staff who work in customer services, business development and quality which is defined as science support. Nor does it account for the non-scientific work that is often undertaken by scientific staff – the latter was raised as an increasing concern by many scientists who referred to the increasing amount of time spent on administrative tasks such as preparing business cases.

- 2.20 Inspectors accept that effective management and science support services are a necessary enabler for the successful delivery of forensic science services, but would wish to see a more concerted effort to reduce management and administrative overheads. It is also accepted that part of the administrative pressures are generated outside the agency and relate to the increasing level of supervision exerted by Government, including the DoJ, in relation to its arms length sponsored bodies. This is leading to resource pressures in many criminal justice organisations, such as FSNI, in areas such as the monitoring of procurement, recruitment, and security processes/practices and therefore diverting resources away from core activities.
- 2.21 An internal review of governance<sup>7</sup> was conducted in 2012 by the Non-Executive Directors who met with each of the Executive Directors. The report found positive views on the level of openness and the leadership style of the Chief Executive but also stated that there was an overly complex organisational structure in place which was impeding decision making, drawing on corporate resources and inhibiting a focus on the 'critical few' priorities. An earlier external commissioned consultancy report found multiple boards and committees with significant duplication of staff on these boards.<sup>8</sup>
- 2.22 Both reports saw the need for a more targeted and focused approach to the top priorities of the agency and a movement away from the resource intensive 'decisions by committee' in favour of quicker and more decisive decision making. Similar views were expressed to CJJ Inspectors by a number of the Senior Management Team.
- 2.23 Inspectors are aware that the FSNI Executive Board has accepted a number of proposals in relation to the resourcing of its management structures and as an aid to more effective decision making. There is a clearer focus on the work of the Executive Board as strategic overview rather than operational issues. The agency has also suppressed a Grade 7 post in Finance. The scope to further streamline the organisational structures of the agency is about seeking a balance on issues such as affordability, current and future priorities and the need to improve its services to customers and the wider justice system.
- 2.24 Affordability, in a prolonged period of austerity across the public sector, will continue to exert financial pressures on FSNI and require an increased focus on demonstrating value for money. A proposed new post of Transformation Director will be an interim appointment and will be mainly funded by the DoJ, to take the lead on a number of key large projects.<sup>9</sup> At the same time, there must also be a review of all existing FSNI posts in the context of affordability, future priorities/challenges and improved serviced delivery. While posts such as Business Development may appear in focus in such a review - due in the main to the strategic decision not to actively seek new customers within a commercial relationship - there is also an onus to examine the division of responsibilities between laboratory and reporting services, as well as corporate services and finance.

7 *Review of Forensic Science Northern Ireland Board Effectiveness*, Executive Summary, July 2012.

8 *FSNI Project Management Review*, Deloitte, May 2012.

9 The DoJ is contributing 80% of the costs for the post.



# Delivery

## Organisation structure

- 3.1 FSNI has the characteristics of a traditional state (national) laboratory catering for a wide range of services. It has been the primary provider of forensic science to the PSNI and has also generally facilitated the brokering of work to other providers where required – this is generally due to a lack of specialism and/or lack of capacity in FSNI. The other main provider of forensic services has been the PSNI itself which has a Scientific Support Services branch focused on crime scenes and the collection of forensic evidence such as fingerprints and images. It also has a Forensic Authorisation Unit on a site adjacent to the FSNI laboratory. The branch has 180 police staff.
- 3.2 FSNI has split its core scientific work into two distinctive but related processes: laboratory services which undertake the extraction and analysis of forensic exhibits and; reporting services which interpret the results and provide reports to its customers and to the justice system. The Chief Executive together with the Directors of Laboratory Services and Reporting Services are strong advocates for these split roles stating that each is a distinct and separate role which provides different perspectives and helps to avoid any cognitive bias – a benefit which has been highlighted by the Forensic Science Regulator in England and Wales. While there are different views among forensic science laboratories on the merits of this split, the immediate concern for FSNI relates to its impact on performance. Some scientists have told Inspectors about a negative impact on communications within FSNI including a more evident silo mentality. CJI Inspectors would advise that this issue should be directly addressed through improved communications. Activities to strengthen collaboration between the respective management functions should also be prioritised.
- 3.3 The range of specialist services is spread across 12 scientific operational sections (for example, biology; DNA, physical methods; firearms). These have the characteristics of stand-alone disciplines or teams, in that the scientists are specialists and have traditionally stayed within defined disciplines. The teams, by virtue of their size, are vulnerable to a loss of capacity through staff shortages and this can have a significant effect on output levels. Management have told Inspectors of repeated attempts to strengthen the resilience of its services through the promotion of cross-skilling in functions such as the Evidence Recovery Unit (Laboratory Services) and in fires and explosives – the firearms team consists of three Reporting Officers and one Assistant Scientist who have received common training with the physical marks team (fingerprints and footwear). Whilst this has delivered some success, the model of relatively small scientific teams may not be sustainable in terms of future challenges. FSNI management has told Inspectors that a cross-skilling plan was developed and is under delivery but acknowledged the limitations of cross-skilling in an organisational model of relatively small reporting teams.

- 3.4 Some of the Directors accept the need to regroup into bigger teams and Inspectors would wish to see more detailed plans and options around the range of services going forward. Retaining a capacity to meet the specialist needs of some customers in areas such as the analysis of documents may require a collaborative arrangement with other laboratories.<sup>10</sup>

## Customer focus

- 3.5 The nature of the business relationships between FSNI and its customers are outlined in service level agreements, which are revised each year to take account of projected customer needs and available/known capacity of the laboratory. The service level agreement also includes the charging arrangements – monthly block-invoices to its main customers. The level of payment is therefore not directly linked to the level of submissions and outputs.
- 3.6 Service level agreements between FSNI and its main customers have struggled to link projected demands with the known and funded capacity of the laboratory. This is particularly evident where demand in areas such as drugs and microchemistry have exceeded agreed levels of submission. Excess demand (over the agreed level set in the service level agreements) will either be withheld from the laboratory, submitted to the laboratory to wait in a backlog/displace other work, or be submitted (brokered) to an alternative provider of forensic science.
- 3.7 A greater alignment of customer needs to service delivery in FSNI will require some critical changes in how demand is determined and managed, as well as how the laboratory assesses and liberates its capacity.
- 3.8 For the PSNI, as the largest customer of FSNI (93% of FSNI income in 2011-12 accounts), the main challenges are to better profile its future forensic science requirements and to optimise its spend on forensic science. The development of demand modelling in the PSNI is progressing and the recent preparation of a three-year profile for forensic science is welcome. A joint submission by FSNI and the PSNI (the Control Plan) was made to the Joint Engagement Meeting between FSNI, DoJ and PSNI in October 2012 which outlined the strategic assessment on issues which may impact on forensic science over the coming years.
- 3.9 The financial context for the development of the PSNI profile is one where PSNI expenditure has been cut by 6.3% in the period 2011-15 – it has frozen FSNI expenditure in the same period. Other FSNI income from the DoJ is subject to cuts applied to the Department. The Historical Enquiries Team (HET) has a separate variable budget (£191,000 for 2012-13) for forensic services.
- 3.10 A second challenge for the PSNI relates to optimising its spending on forensic science. The view of some police and other customers that the absence of a commercial marketplace (for example, competitive tendering for forensic products) has led to higher prices in Northern Ireland must be balanced against the reality of a smaller geographical region removed from the multi-supplier and multi-customer marketplace of England and Wales. A DoJ review on FSNI status in 2009-10 found that the entry of external commercial providers would have incurred considerable additional costs, particularly in crime scene analysis and court related work. A major benefit for customers such as the PSNI would be greater transparency around the costs of FSNI services and products. The previous CJI inspection recommended

<sup>10</sup> FSNI is in discussions with the Scottish Laboratory about how best to optimise specialist services provided by small teams such as document analysis.

the implementation of a full activity cost system to aid customers in their buying decisions. Inspectors consider that this level of information could be delivered through the introduction of notional transactional charging by FSNI.

- 3.11 The provision of notional transactional charging to the PSNI offers the potential to challenge the way that forensic science services and products have been requested, utilised and resourced within the PSNI. One of the problems in the past has been the mismatch between demand and budgetary accountability with the result that over-submissions (with regard to the service level agreement) in one area have led to negative implications for other parts of the business. Notional transactional charging could support notional budgets within the PSNI and help to moderate and better utilise available resources. Establishing a closer linkage between demand and financial accountability is key to maximising the benefits of a limited forensic science budget.
- 3.12 **The PSNI should identify and implement arrangements for the effective and efficient management of demand for forensic science (for example, devolved budgets for forensic science).**
- 3.13 The State Pathologist, who has been a customer of FSNI for a number of years, has said that the laboratory has *'repeatedly and consistently failed'* to deliver toxicology reports in accordance with the joint targets agreed in the service level agreement. Similar concerns were evident at the time of the last CJI inspection. FSNI has confirmed that a short-term improvement plan has been implemented with new initiatives around prioritising the production of simple toxicology cases (i.e. negative results) and agreeing the product lists. Performance against the State Pathologist's Department service level agreement was much improved for the last reporting periods in 2012-13 and 2013-14. The State Pathologist's Department contributes about £400,000 per annum to FSNI.
- 3.14 The PPS is a relatively small customer (1.5% of FSNI income and £225,000 expenditure in 2012-13) but a key user of forensic science. Forensic science evidence is often a critical element in whether a prosecution is taken by the PPS as well as shaping the actual prosecution case in the courts. The use of forensic evidence by Prosecutors can also determine wider case management including the avoidance of delays. Realising the potential benefits of presumptive testing in drugs cases will require the support of the PPS while the use of staged reports needs to be aligned with PPS practices and approaches to issues such as early guilty pleas. Delivering meaningful change will also require the support of the defence.
- 3.15 The PPS has an important contribution in relation to the performance of FSNI – scientists have told Inspectors about the importance of liaison with the PPS at forensic conferences and pre-trial meetings as this helps to shape the specific contribution of forensic science. The recent guidance from the Attorney General<sup>11</sup> places a greater onus on better communication as a means of reducing avoidable delay in cases. It states that *'where unreasonable delay has been caused by FSNI then responsibility for this should be accepted promptly and notified to the PPS together with, if the relevant work remains undone, a detailed timetable for its completion. FSNI should not accept responsibility for delay which has been caused by other public authorities, and should advise the PPS of any delay which is wrongly attributed to FSNI.'*
- 3.16 While the NICTS is a relatively small customer for FSNI (£16,000 for 2012-13), the courts are the fora in which the quality of FSNI services and products are ultimately tested. Reliable and timely information on court sittings are also critical to the best use of forensic scientists as witnesses in criminal cases. As FSNI is

11 *Guidance by the Attorney General for Northern Ireland* pursuant to section 8 of the Justice (Northern Ireland) Act 2004, 2012 No.1.

not fully aligned with the Causeway IT system (case details), there is an added responsibility to ensure that the laboratory is aware of any court requirements (for example, when a report is due to the court). This often entails a telephone call from a police Investigating Officer to the relevant scientists. When things go wrong, which is more likely in such an ad-hoc system, the implications for FSNI can be severe in the form of judicial criticism.

- 3.17 CJJ made a recommendation that '*FSNI, in conjunction with the PPS and NICTS should agree a strategy to determine their forensic science needs at court and implement a plan to reduce unnecessary FSNI Reporting Officer's time spent in court.*' The recent development of video evidence links between FSNI and the courts (initially in Belfast) offers the potential to deliver efficiencies for both the laboratory and the courts. Early findings are pointing towards reduced time spent at court for scientists and also a possible impact on earlier agreement on pleas.

### FSNI capacity

- 3.18 Defining and increasing the capacity of FSNI to meet the needs of its criminal justice customers continues to be the most important challenge for FSNI. While part of the solution rests with the way customers manage their forensic science requirements, the principal solutions rest with FSNI.
- 3.19 **FSNI should implement a series of actions to increase the capacity of the laboratory to deliver a quantified increase in the volume of outputs and a quantified reduction in avoidable delay. The actions and targets should be set as part of the current business planning cycle.**
- 3.20 The starting point is the use of scientists at crime scenes – this can take the form of expert advice to the police, as well as the collection of evidence. This is a critical stage in terms of overall quality control and can determine the broader investigation process. The feedback from police, including the Assistant Chief Constable (ACC) Service Improvement is that Senior Investigating Officers place a high value on the advice from lead scientists at crime scenes. There is however a legitimate business assessment to be made around the most effective use of scientists at crime scenes and whether the current level of attendance represents the best use of scientific resource. The on-call and laboratory and scene attendance budget for 2012-13 was £206,000 which is a reduction on the costs at the time of the last inspection (i.e. fewer scientists on-call). This needs to be balanced against the business needs within the laboratory as well as any possible impacts on the overall quality of FSNI services.
- 3.21 The next key point is the submissions process. Most forensic science exhibits are collected and submitted by the PSNI through its Forensic Authorisation Unit (FAU) which approves all submissions within the parameters (for example, thresholds) of the service level agreement. In the six months to September 2012, FSNI received just over 10,000 exhibits from the PSNI. There is no Management Information System (MIS) within the FAU upon which the team can monitor submissions in line with the agreed service level agreement levels. Improving the MIS available to the PSNI and to the FAU in particular should be a priority for the PSNI in its attempt to better measure and manage the demand for forensic science.
- 3.22 The greatest benefits for both FSNI and its customers could accrue from a more rigorous approach to evaluating the potential value of forensic science at an earlier stage i.e. when the decision to submit an exhibit is taken by the police. This is also an opportunity for greater FSNI input in terms of advice and training which could help to overcome a perception about a lack of control over the type, volume and timing of exhibits that enter the laboratory – this concern emanates from a widely held view within FSNI

that the service level agreement submission thresholds have been ignored by the PSNI.

- 3.23 There is also a widely held frustration within the laboratory concerning criticisms made in court which attributed case delays to the forensic science laboratory when later analysis showed that much of the delay was associated with the pre-submission period. Inspectors were provided with the FSNI analysis of specific cases mentioned in court and also separately conducted a review of tracked cases within the laboratory. This showed that significant delays had occurred at the pre-submission stage of cases when the police sometimes hold back a case until further investigation has been done or have anticipated a guilty plea in court. The problems arise when a case is contested. Some delays are also associated with infrequent (weekly) delivery services for less urgent cases - this can also result in an influx of exhibits on certain days with a resulting impact on FSNI customer services. Inspectors see scope to improve this part of the process so that FSNI and other justice bodies are aware of the end-to-end case times and that this is fully communicated to the courts.
- 3.24 All exhibits enter the laboratory through the FSNI Customer Services section. Each exhibit has a Forensic Delivery Docket (FDD) which in turn creates a product list. All of the products are checked by Customer Services and accepted if in compliance with quality controls. A review of the PSNI non-compliances in the six months to September 2012 shows that errors were around 6% of all submissions – about half of these were corrected by the FSNI (relatively minor) while the others were deemed as non-compliances. These included incorrect packaging, no integrity seal, incorrect paperwork and required forms not submitted. FSNI management told Inspectors of the need for quality management protocols with the PSNI and a better mechanism to fix the root causes of repeated errors. FSNI Customer Services staff told Inspectors of a decrease in complaints and non-conformities in recent years.
- 3.25 All exhibits/products are linked to cases, which in turn are given a classification status – the most serious and urgent cases are accorded as priority 1 which means that they receive a higher level of service within the laboratory (for example, measured against separate timeliness targets). As many of these cases are related to serious crime, they are often subject to a case conference where a case specific forensic strategy will usually be prepared. The feedback from customers, particularly the PSNI, was a high level of satisfaction on priority cases.
- 3.26 Other cases, principally volume crime cases, have a lower priority and performance has been measured against a different set of service level agreement targets. Most of these cases are dealt with by district policing (for example, burglary) and often require expertise in addition to the work conducted by the PSNI Scientific Support Services (for example, fingerprints). While these crimes are less serious, the impact on local communities can be very negative. Any undue delays in forensic science analysis can also impact on case progression. Previous CJI inspections on *Avoidable Delay* have found that one of the common reasons cited for adjournments in the Magistrates' Courts was *'awaiting a forensic report'*.
- 3.27 The delivery of quality standards is undertaken through the UKAS accreditation process (ISO 17025: 2005 standard), which is the commonly used standard for forensic science/service providers in the United Kingdom. It is the view of the accrediting organisation that FSNI has significantly improved its approach and application of quality controls systems with the result that accreditation for testing and calibration has been sustained and extended across a broader range of functions/units. Meetings with the quality team, senior management and staff have demonstrated a strong commitment to implementing best practice on quality. While the scope of accreditation is good, relative to other laboratories and particularly in relation to many police forces, there remain some gaps in specific method accreditation in

key areas such as explosives, bulk drugs, toxicology and biology (blood pattern analysis at scenes). Overall quality in the organisation is subject to the quality management system.

- 3.28 Inspectors would expect FSNI to continue to work with the Regulator to ensure that the Codes of Practice (2011) and time lines for accreditation are achieved. This may entail tighter timescales, than currently planned by FSNI. CJI had recommended that *'FSNI should continue to work closely with the Forensic Science Regulator to align its approach to the proposed 'standards framework' and ensure its implementation in Northern Ireland'* still applies. The Attorney General has issued guidance that *'it is important that evidence and materials are obtained, stored and processed in ways that ensure the integrity of the data obtained and the reliability of the analysis for any legal proceedings.'* The holding of personal data, particularly DNA samples must continue to comply with ISO standards and DNA Custodian and UKAS requirements.
- 3.29 There is also an increasing onus on the wider justice system to take a 'crime scene to court' approach to quality management which ensures greater consistency throughout the processes. The unitary approach taken in Scotland merits further consideration in this context. Inspectors would also wish to note that the increasing pressures associated with casework may have quality risks which require the rigour of a systematic approach to accreditation.
- 3.30 Following the submission of a case to the laboratory, it is allocated to work-streams and to a Reporting Officer. It is the Reporting Officer who defines a case strategy and creates a work list, including instructions, for the Evidence Recovery Unit (ERU). The ERU team manager will then allocate work to the relevant specialists to maximise the value of any evidence and trace recovery. The working relationship between the ERU and the Reporting Officer(s), which is outlined in an operational level agreement, is very important with regard to the overall quality of the service delivered by FSNI (for example, quality, timeliness of analysis and preparation of a report for customers and the court).
- 3.31 An excess level of demand from customers, lack of capacity in FSNI teams and/or absence of relevant expertise means that the analysis and reporting of some cases/exhibits will be dropped, scaled back, delayed or sent to another laboratory. All of these responses have been part of the business model used by FSNI for a number of years. The risks are mitigated (not eliminated) by the use of a case classification system which accords priority to serious crime and where forensic science is needed for a court hearing (for example, bail application). The laboratory has also brokered work to other laboratories (for example, drugs, toxicology, DNA) as a means of reducing backlogs and providing additional specialist analysis when required - though the reduction in capacity in England and Wales has made this more difficult.
- 3.32 The performance of FSNI, in terms of its targets and customer expectations has been inadequate in some key areas since the last CJI inspection. Inspectors would note however that the quality of the science has been maintained – the main issues relate to delays in the preparation of reports. This has been most acute in terms of drugs, microchemistry and physical methods – areas which have also experienced higher than anticipated submissions. Inspectors are aware of specific remedial actions undertaken by FSNI, including the recruitment of new staff, investment in technology and the implementation of lean management initiatives in the drugs section under the Transformation Programme. FSNI sent (brokered) 757 cases to laboratories outside Northern Ireland in the 12 months up to March 2013 to meet the demand for analysis of drugs cases. The cost of these examinations was £293,000.<sup>12</sup>

<sup>12</sup> Written answer by Minister of Justice to Northern Ireland Assembly Question 21275/11-15.

- 3.33 A longer term solution may rest with the introduction of more rapid and presumptive testing of drugs. There are two types of tests - presumptive test which provides an indication of which type of substance is present; and confirmatory test such as a mass spectrometry which is more specific and will determine the precise identity of a substance. The laboratory has used the latter test in drugs analysis, which does provide greater certainty but at a cost in terms of backlogs and resources. The option of presumptive testing of drugs has been used by other laboratories, with the support of their justice systems, to test for common substances and also to facilitate early guilty pleas. In Scotland, about 70% of drugs cases have been decided on presumptive testing.
- 3.34 The decision to introduce presumptive testing in Northern Ireland has some benefits and risks which need to be fully considered. It is also a decision which requires the input of the criminal justice agencies and should form part of any discussions around the future development of FSNI as well as linking into current proposals and actions on reducing avoidable delay as part of Faster, Fairer Justice.
- 3.35 The need to further modernise and develop the processes around how forensic science is undertaken in FSNI formed the basis of a number of recommendations in the last CJI report. Progress in this regard has been slow over the past four years. Some progress has been evident in relation to a streamlining of processes, for example lean management in drugs and laboratory services has embraced change in the form of new approaches and application of best practice and delivered a 20% efficiency gain. There is scope to further progress the previous recommendation that *'the agency should continue to identify opportunities to increase the quality and through-put of casework. Lessons learned and best practice identified should be mainstreamed into wider process improvements.'*
- 3.36 Areas requiring more attention include Reporting Services which comprises the most senior scientists who interpret results and prepare reports for customers. They also present and interpret evidence for the courts. The Reporting Officers are the primary interface with the justice system and sometimes feel that they are a 'sandwich between the PSNI and PPS' i.e. pulled in two directions.
- 3.37 Part of the difficulty with Reporting Services relates to what is perceived within the Directorate as inadequate succession planning with a slowness in responding to vacancies and skill gaps. The result has been a loss of staff morale, most evident among some of the most senior and experienced scientists. The solution is broader than just recruitment – there is also a need to instil a greater level of commitment among staff who are prepared to embrace the planned changes.
- 3.38 The importance of Reporting Services, as the key interface with the other justice organisations, means that any problems are more likely to be visible and impact on the overall performance of the justice system - delays in the preparation of reports is the best example. The focus on quality and presentation of best evidence in court can support and hinder this process - positives include comprehensive reports and expert evidence to the courts while negatives relate to the impact on other cases which can be delayed. The critical issue for Inspectors is to reach a point where the reports and evidence are fit for purpose i.e. what customers and the courts need. It must also take account of the broader outputs of the agency rather than just the merits of a single case.
- 3.39 One area of note is the efforts to introduce a phased forensic reporting model, which would allow scientists to undertake analysis and produce staged reports to reflect the forensic science needs and stage of case progression. Delays in the past have occurred due to the practice of not completing reports until all the forensic work has been completed. Staged reporting has not been done on a formal basis as

it previously only happened when requested by the court. A likely early guilty plea has not to date been reflected in the work of scientists and should not require the same level of report as that for a case which is contested and proceeds to trial. Inspectors accept that staged reporting will require the support of the wider justice system. There is however an onus on FSNI, as the main beneficiary, to proactively push the implementation of this initiative as it has only applied to the more serious crime cases where a lead scientist has been allocated.

- 3.40 Attendance of scientists at court was raised as an issue in the last inspection. Significant changes have occurred since then. Reporting Officers have told Inspectors about a *'remarkable improvement in the PPS approach to us'* in relation to less need to attend Crown Court – there is a view that scientists are still required to attend Magistrates' Courts too often i.e. when not required to present evidence. A more recent development has been a decision to implement video link facilities between the laboratory and the courts which will further reduce unnecessary attendance.
- 3.41 Improving the effectiveness and efficiency of internal processes should deliver important benefits to FSNI in terms of best use of resources and better service delivery to its customers. One of the consequences of the existing workload has been a dependence on overtime as a means of meeting performance targets. While this is an acceptable temporary response to spikes in demand, it is evident to Inspectors that the agency is increasingly dependent on overtime in particular sections. This is neither sustainable for the agency nor for broader staff welfare.
- 3.42 Meetings with FSNI staff, augmented by financial data, have provided Inspectors with a greater insight into the use of overtime. The annual budget for overtime was £183,000 in 2012-13 which equated to about 14,000 hours of work. The financial profile showed that the budget was on target in June 2012. The biggest allocations were made to biology Reporting Officers, alcohol drugs and toxicology, ERU and road traffic collisions (nearly 60% of the overall overtime budget). This led some staff to refer to *'most biology are in at weekends'*. A review of weekend overtime expenditure shows that most is taken on Sundays – one unit had 20 hours on Saturday and 1,265 on Sunday (Sunday is double time while Saturday is time and a half). While some of this may have a business purpose, it would point towards the need for a firmer corporate grip on the overall need for, and management of overtime.
- 3.43 The conduct of the core scientific work of FSNI requires supporting architecture in the form of IT systems, human resource planning, financial and estate management. Two of the most important projects over the past decade have been the planning for a new laboratory and the introduction of a new MIS. Whilst there has been corporate oversight at senior management level, the actual planning and management of the projects have been done as stand-alone projects. This changed in the past year with the decision to bring the main projects together under a corporate transformation initiative which will be managed by a newly recruited Director.
- 3.44 The longest outstanding project has been the construction of a new laboratory to replace the current premises, which was regarded as temporary since its Belfast premises were destroyed by a bomb in 1992. At the time of the last inspection it was envisaged that £25m would be provided in the Comprehensive Spending Review towards the cost of a new laboratory – the estimate was subsequently increased to £50m. Considerable internal planning was taking place to plan and design this facility in 2009. CJI made a recommendation that *'the planning and design of a new forensic science laboratory should be aligned to the proposed criminal justice forensic science strategy.'* In the intervening period, neither the strategy nor the laboratory has progressed to the extent envisaged in 2009.

- 3.45 The position at the time of this inspection was that the DoJ had approval for new laboratory facilities to deliver trace evidence collection and DNA profiling. However, it has a reduced budget of £15m. There is now a higher level of certainty that this facility will be delivered in the next few years and will allow FSNI to strengthen its range of DNA services in particular. This is a positive development and has potential to deliver additional benefits in terms of cost efficiencies (10% envisaged), quality controls and staff morale. But there are also considerable risks in any new facility, particularly where most of the staff and services will remain in the existing neighbouring facility. Realising the full benefits of this considerable investment will also require a concerted change management programme.
- 3.46 **FSNI should ensure that a benefits realisation plan for the new laboratory facilities incorporates change management initiatives, quantify how the return on investment can be realised and include mitigating factors on known risks.**
- 3.47 A second, now linked project, relates to the implementation of a new MIS called Perseus. Inspectors were told in 2009 that the Perseus Outline Business Case was approved by the Northern Ireland Office. A new Outline Business Case has been approved by the Department of Finance and Personnel. It has a value of £4.013m.
- 3.48 CJI had made a recommendation in the last report that *'the approval and implementation of the Perseus IT Programme should be expedited with priority accorded to the production of a full activity based cost system and work flow management system.'* This has not happened and should be considered as an ongoing risk to the performance of the organisation as other operational improvements (for example, transactional charging, case tracking) were explicitly linked to the development of this system. The inclusion of this project in the Transformation initiative will hopefully see more concrete progress. The new specification schedule for Perseus (July 2013) has detailed information on building an enhanced capacity model for FSNI.
- 3.49 FSNI holds a number of databases, including the Northern Ireland DNA database on behalf of the PSNI. It also uploads local profiles to the United Kingdom National Database. It has its own footwear database. CJI had made a recommendation in the last report that *'all crime databases held by FSNI, which are compatible with those held by the PSNI, should be subject to a shared services plan. The linking of the footwear databases in both organisations should be a priority.'* The evidence is that this recommendation requires more work and that the PSNI and FSNI should identify and reduce possible areas of duplication including databases. Areas for consideration include fingerprints, footwear and e-crime.
- 3.50 The previous report also included a recommendation that *'FSNI should increase its resource allocation to research and development and seek additional funding from the NIO.'* Justifying a higher spend on research and development has become more difficult during this period of austerity. Key customers and the DoJ require a closer correlation between any investment in research and development and outcomes such as better level of crime detections, new methods and analysis etc. Inspectors support the efforts by FSNI to establish closer linkages with third level education bodies.
- 3.51 The resourcing and implementation of the Research and Development Strategy has been identified as one of the main risks of the agency in terms of its impact on meeting the evolving forensic science needs of the justice system. Many staff commented on the practical difficulties of doing research as part of their day-to-day work, for example, unable to do specific internet searches due to blocked sites/banned search terms etc.

- 3.52 The Home Office has found that commercial forensic service providers have reported investing around 5-9% of their revenues into research and development. This ranges from developing products and systems with a specific focus to improve existing services, to more long-term broad-ranging research projects.
- 3.53 One solution to the funding of future research and development is to establish a direct link with efficiency savings i.e. a proportion of efficiency savings could be set-aside for research and development. It is recommended that the **FSNI, in conjunction with the DoJ and its main customers, should implement a plan to allocate a specified proportion of efficiency savings into research and development.**
- 3.54 The CJJ recommendation on building capacity incorporates the range of delivery issues covered in this chapter. Inspectors have been assured by the Chief Executive that the agency will produce a detailed action plan which outlines all of the required actions. Inspectors would wish to see tangible results in terms of an increase in the volume of its outputs and a corresponding reduction in avoidable delays in its reports to the criminal justice system. The action plan should form part of the current business planning cycle and be achievable within a two-year period. This work should also be informed by benchmarking data with other laboratories.



# Outcomes

## Performance measures

- 4.1 FSNI performance targets are set each year by the Chief Executive and staff of the agency. These targets and associated development objectives are then published in its Corporate and Business Plans. Performance against each of the targets is reported in the FSNI's Annual Report and Accounts.
- 4.2 The Annual Report and Accounts for 2012-13 states that the agency '*achieved most of its published business plan targets*'. Most importantly, the quality of the science, in terms of the processes and outputs, has been assessed as good.
- 4.3 The target to deliver 100% of Key Performance Indicators with the PSNI was achieved in 2012-13 despite significant over-submission (as stipulated in a service level agreement) in drugs. A similar Key Performance Indicator for the State Pathologist's Department was not achieved until the end of 2012. Business process improvement targets were partly achieved: good progress on DNA processes but scope for improvement on the introduction of new fast stream procedures. Other targets on information management, end-to-end case management and finance were all achieved. A previous target related to the delivery of the Perseus Programme, which was not achieved in 2011-12 was not included as a Key Performance Indicator in 2012-13.
- 4.4 A satisfaction survey conducted with the PSNI in 2011 found that 70% of respondents strongly agreed/agreed that they were '*overall satisfied with the service*' provided by FSNI. The highest levels of satisfaction related to the Duty Scientist service, expert witnesses in court, casework forensic strategies and the quality of forensic reports. The views of the PPS showed that 59% of respondents expressed overall satisfaction with the level of service provided by FSNI. PPS respondents also had high levels of satisfaction on the quality of FSNI reports, evidence provided in court and service provided by FSNI expert witnesses.
- 4.5 One of the more problematic areas has been drugs and toxicology, which has experienced rapid demand in recent years and led to capacity overloads in FSNI and delays. It also led to complaints by both the PSNI and the State Pathologist's Department. Inspectors are aware of recent improvements in FSNI and early indicators point towards improvements. For example, FSNI has stated that the time required for cannabis only analysis has fallen from 160 days to 30.

- 4.6 The problem of delays in drugs cases, which form a major part of the work undertaken by the State Pathologist's Department remained a concern for a number of years. Actual performance against a target to produce 70% of reports within 60 days was about 40% in 2012. Whilst part of the problem resulted from higher than anticipated demand, the solution (at least with regard to the recent improved performance) has rested with internal process improvements within the laboratory as part of a business transformation programme.
- 4.7 There were considerable concerns in PSNI around case timeliness with just 39% of respondents stating strongly agree/agree that FSNI meet their commitments in relation turnaround of urgent submissions'. The areas of most concern for the PPS were the same as police respondents (though with lower levels of satisfaction) i.e. turnaround times for routine and urgent cases. There were however, in contrast with the PSNI, higher levels of satisfaction in relation to strategic alignment with PSNI and FSNI.
- 4.8 This may be due in large part that the target is a measure of FSNI capacity rather than the requirements of the customer. The targets have been established on the basis of capacities rather than service delivery. For example, the current service level agreement between the PSNI and FSNI is little changed from the previous year - turnaround targets remain largely unchanged with the only exception being those of crime toxicology which have reduced to align to those of the State Pathologist's Department. Actual performance would suggest a need for significant change. FSNI management have accepted that FSNI performance targets are not aligned with those of the justice system.
- 4.9 All organisations are faced with the challenge of developing targets which are SMART – Specific, Measurable, Attainable, Relevant and Time Bound. One of the long-standing issues for FSNI, which is reflected in the scope of its targets, has been the difficulties in setting a target which can measure the value that forensic science provides to the criminal justice system. Targets to date have been activity and outputs-based rather than trying to measure longer-term outcomes. For example, the effectiveness of forensic science is not measured by FSNI in any quantifiable way and the agency is unable to quantify the added value of forensic science to an investigation. The PSNI has started to develop an indicator of effectiveness through an analysis of its hits (detections) on its databases which should provide more information on forensic science.
- 4.10 FSNI need to demonstrate value for money to its customers. This can be aided by benchmarking FSNI against other forensic science providers. The FSNI had a target in the 2011-12 Annual Report to demonstrate value for money through *'like-for-like cost comparison, versus other comparable Forensic Science Suppliers, on an agreed basket of standard products'*. A report was issued in March 2012 and was limited to those areas where FSNI is already in possession of benchmarking data (largely through work it has sub-contracted through brokering out in the previous 12 - 24 months).
- 4.11 The main finding of the benchmarking report, which accepts the significant differences between Northern Ireland and England and Wales, was that FSNI is more expensive for all DNA products. Of the nine alcohol, drugs and toxicology products compared, eight of FSNI's products were considerably more expensive and one was 33% cheaper than that of the other provider. Microchemistry 'stubs' analysis was significantly more expensive across three products, though FSNI stated they had developed a very specific and unique product for the police. The hourly rates for scene attendance and reporting, including the issue of full evaluative statements was more competitive than a provider in England and

Wales (around 30% cheaper across a number of products). This is an important factor in support of a local based laboratory. The average variance across the products compared was 127% greater than the alternative provider.

- 4.12 CJI Inspectors strongly support the benefits of more comprehensive benchmarking of performance against a broader range of forensic science laboratories. A number of Directors have expressed their support for FSNI inclusion in an international benchmarking project (FORESIGHT). Inspectors would wish to see a corporate commitment to this type of benchmarking. A benchmarking target was not reported in the FSNI Annual Report for 2012-13.
- 4.13 CJI made a recommendation in 2009 that '*FSNI should, in conjunction with its customers, develop a clear set of performance indicators. A more concise and user friendly performance report is required.*' The most relevant report relates to the performance against the service level agreement with the PSNI. The report format has been revised, but it is still an overly complex and difficult document, which is not widely disseminated or used by FSNI or the PSNI.
- 4.14 **FSNI, in conjunction with the criminal justice agencies, should develop a set of performance indicators based on measuring the value of forensic science to the criminal justice system. These should be aligned with the targets in any new forensic services strategy.**



# Appendices



# Appendix 1: Terms of reference

## An inspection of Forensic Science Northern Ireland

### Introduction

Criminal Justice Inspection Northern Ireland (CJI) proposes to undertake an inspection of Forensic Science Northern Ireland (FSNI).

FSNI is an agency within the Department of Justice (DoJ) with a mission to provide effective impartial forensic science to enable the integrity and speed of justice.

### Context

The most recent full inspection of FSNI was conducted by CJI in 2009 – it followed a full inspection in 2005 and a follow-up review in 2007. The published report (July 2009) made 12 recommendations for improvement.

The DoJ (then the Northern Ireland Office) and FSNI developed a shared action plan in response to the reports recommendations, with the sponsor department taking the lead on one recommendation (a criminal justice strategy for forensic science) as well as sharing responsibility with the agency for another three recommendations.

The principal challenges for FSNI, identified in the last report, relate to the delivery of an effective and efficient service to the justice system. This includes the need to maintain the quality of the science as well as to demonstrate value for money. The role of FSNI in contributing to avoidable delay in the processing of criminal cases continues to be a major issue for this inspection.

The local marketplace for forensic science services has been impacted by the major changes to the delivery model in England and Wales, where the largest public sector provider (Forensic Science Service) has been replaced by private sector laboratories. At the same time, many police forces have increased the range of scientific and forensic services that are undertaken in-house. Public sector laboratories, such as FSNI and those in Scotland and the Republic of Ireland are working on closer working relationships.

### Aims of the inspection

The aims of the inspection are to:

- assess progress against the recommendations (12) of the 2009 inspection report;
- review the governance, leadership, performance and accountability of the agency including benchmarking against other forensic science laboratories;
- assess the contribution of FSNI to the criminal justice system; and
- obtain assurance on the quality of the science.



### Methodology

The inspection will be based on the CJI inspection framework for each inspection that it conducts. The three main elements of the inspection framework are:

- strategy and governance;
- delivery; and
- outcomes.

The CJI constants in each of the three framework elements and throughout each inspection are equality and fairness, together with standards and best practice.

### Design and planning

The planning stage of the inspection will include:

#### *Preliminary research*

- Collection and review of relevant documentation such as corporate and business plans, external reports, internal strategies, policies, minutes of meetings, performance management, financial management and monitoring information, business statistics, risk registers, internal and external surveys and any other relevant internal reviews, papers and correspondence.

#### *Benchmarking*

- Collection and review of documentation and reviews regarding forensic science laboratories/services in other jurisdictions;
- participation at international forensic science conferences (Dublin and The Hague); and
- arrange possible study visit to forensic science laboratory.

#### *Contact with agency; exploratory stakeholder meetings*

- Identify and procure external specialist support to CJI;
- planning meeting with FSNI senior management including comments on draft terms of reference;
- identify liaison person in FSNI;
- finalise terms of reference and disseminate appropriately; and
- planning meeting with key stakeholders (for example, DoJ and PSNI).

#### *Procurement of external support*

- Develop business case and contract approval for external specialist support;
- conduct tendering process; and
- select and award contract.

## Delivery

The fieldwork stages of the inspection will comprise:

### *Self-assessment*

- FSNI updated response to 2009 report action plan and relevant supporting documentation.

### *Fieldwork*

- Development of fieldwork plan (in conjunction with FSNI);
- meetings (interviews and focus groups of FSNI staff and independent Board members);
- stakeholder meetings including the DoJ, PSNI, PPS, NICTS, State Pathologist's Department, Office of the Police Ombudsman, Judiciary and members of the legal profession;
- analysis of data and case files;
- benchmarking with other laboratories (meetings and possible study visit); and
- initial feedback to agency.

## Publication and closure

### *Writing up report*

- Writing up draft report; and
- factual accuracy check with FSNI and DoJ.

## Publication

- Ministerial approval;
- press release;
- identification of publication date;
- publication arrangements; and
- action plan in response to recommendations (possible incorporation as an appendix to report).



## Appendix 2: Methodology

### Desktop research and development of inspection terms of reference and question areas

Research literature and guidance documentation was reviewed in relation to FSNI and the wider provision of forensic services in other jurisdictions.

#### Document review

CJI made a request to FSNI and the DoJ to provide all relevant documentation and other supporting material in accordance with the terms of reference for the inspection. This material was reviewed and formed the basis of the questions for the fieldwork.

FSNI also provided an updated progress report on the 2009 CJI inspection report recommendations.

#### Benchmarking

CJI Inspectors have reviewed published material relating to other forensic science providers and were able to draw upon specific information provided to Inspectors during the 2009 inspection – this included documentation relating to the forensic science laboratories in The Netherlands and Finland.

CJI Inspectors also participated in two international conferences focused on forensic science (Dublin and The Hague).

As part of the fieldwork stage, Inspectors visited and met with management at the forensic science laboratories in Dublin and Glasgow.

The two forensic science consultant experts who worked on this inspection also provided benchmarking information from their own international experiences of forensic science (for example, New Zealand, Canada, USA and England and Wales).

#### Fieldwork

A fieldwork plan was prepared in conjunction with FSNI which included meetings with all of the Senior Management Team (Executive Board), all Executive and Non-Executive Directors and a sample of administrative and scientific staff from across the various functions. The latter took the form of focus groups and some follow-up individual meetings.

Stakeholder meetings were conducted with the PSNI (ACC Service Improvement, ACC Crime Operations, Head of Scientific Support Services); State Pathologist's Department (State Pathologist); PPS (Policy and Departmental prosecutions), NICTS (Chief Executive and Senior Operational Managers), DoJ (Justice Delivery and Access to Justice Directorates) and the Judiciary. The Belfast Solicitors Association was requested to provide their views.

Visits and meetings were held with the Chief Executives and senior management of the forensic science laboratories in Scotland and the Republic of Ireland.

Inspectors reviewed a sample of FSNI case files, primarily for any delays in processes and procedures.

## Appendix 3: Progress on 2009 recommendations

Recommendation	Progress since 2009
The Northern Ireland Office, in partnership with the main criminal justice agencies, should develop a bespoke criminal justice strategy for forensic science which meets their needs and provides a road map for the future development of FSNI. This should include an organisational model for the agency.	Not Achieved
The Chief Executive, in conjunction with the Northern Ireland Office, should review the draft framework document to ensure that it helps deliver the corporate objectives of the agency and address the challenges of a competitive marketplace.	Achieved
FSNI should seek to develop, in conjunction with other laboratories (for example, the Republic of Ireland and Scotland) a plan to facilitate increased collaboration including the exchange of staff on secondment.	Not Achieved
FSNI, in conjunction with the PPS and NICTS should agree a strategy to determine their forensic science needs at court and implement a plan to reduce unnecessary FSNI Reporting Officer's time spent in court.	Achieved
FSNI should continue to work closely with the Forensic Science Regulator to align its approach to the proposed 'standards framework' and ensure its implementation in Northern Ireland.	Achieved
The agency should continue to identify opportunities to increase the quality and throughput of casework. Lessons learned and best practice identified should be mainstreamed into wider process improvements.	Achieved
The planning and design of a new forensic science laboratory should be aligned to the proposed criminal justice forensic science strategy.	Partly Achieved
The approval and implementation of the Perseus IT Programme should be expedited with priority accorded to the production of a full activity based cost system and work flow management system.	Not Achieved
All crime databases held by FSNI, which are compatible with those held by the PSNI, should be subject to a shared services plan. The linking of the footwear databases in both organisations should be a priority.	Not Achieved
FSNI should increase its resource allocation to research and development and seek additional funding from the Northern Ireland Office.	Not Achieved
FSNI should, in conjunction with its customers, develop a clear set of performance indicators. A more concise and user friendly performance report is required.	Partly Achieved
FSNI should prepare a final summary report on the implementation of the Omagh Response Plan which should be made available to all key stakeholders. Any outstanding actions should be mainstreamed into the overall performance improvement arrangements of the organisation.	Achieved



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**CRIMINAL JUSTICE INSPECTION NORTHERN IRELAND**  
14 Great Victoria Street  
Belfast BT2 7BA  
[www.cjini.org](http://www.cjini.org)

