

**ANNUAL  
REVIEW**

22/23



**FORENSIC  
SERVICES**  
SEIRBHISEAN  
FOIREANSACH



# FOREWORD

**Welcome to the SPA Forensic Services annual review for 2022-2023, a year in which we delivered significant performance improvements as a result of investment and change, planned and implemented over the past few years.**

This has been the first in which output has exceeded demand significantly in Forensic Services. These improvements have been delivered by our 600 highly-trained and skilled staff across all areas of Forensic Services. The changes being made through the New Operating Model will also allow for more flexible resource redeployment to reflect changing demand.

The demand in Groups 1 (Crimes of Violence), 4 (Fire raising and vandalism), 6 (Miscellaneous, predominately drugs deaths) and 8 (non-crime) – which includes sudden, suspicious and unexplained deaths – have all remained relatively stable over the previous five years. Group 2 (Sexual crime) demand continues to rise year-on-year with a rise from 1200 to 1500 cases over the past two years.

Demand for Group 3 (Crimes of Dishonesty) has risen but remains below pre-pandemic numbers. Significantly, the caseload for drugs (Group 5 crime) has declined leading to an improvement in the service delivery times with faster reporting of these cases. There have also been increased requests to Biology and the Volume Crime unit leading to a rise in case submissions for the third year in a row.

The transfer of the Post Mortem Toxicology service from the University of Glasgow to Forensic Services (Project Weaver) was successfully delivered on time as planned on 1st December. This was the culmination of excellent collaborative working across Forensic Services, Police Scotland, COPFS, and Scottish Government and is a major achievement given the complexity of the project.

In Q4, the Deployment of Scene Examination project was taken forward. This involved creating the National Tasking Unit, based in Rushton Court, Dundee, and – following an extensive training programme – the unit would be ready to go live early in the next financial year on 3rd April 2023.

The first Biometrics Code of Practice for Scotland took legal effect from 16 November 2022 having been approved by the Scottish Parliament. SPA, Police Scotland, and PIRC are all legally required to comply with the code. Forensic Services have been working closely with the Scottish Biometrics Commissioner Dr Brian Plastow and all Forensic Services staff had been informed of their responsibilities under the Code of Practice.

The annual UKAS Surveillance assessments of Forensic Services began with visits to Aberdeen on the 11 October 2022 and continued in Dundee, Edinburgh and the Scottish Crime Campus until November 2022. Maintenance of accreditation to ISO 17025 has been achieved for the 25th consecutive year of Forensic Services. Forensic Services laboratories have maintained accreditations for many years: Dundee since 01 July 1998; Glasgow (now at the Scottish Crime Campus) since 5 Nov 2001; Edinburgh since 04 Oct 2004; and Aberdeen since 01 July 2005.

The progress on implementation of the New Operating Model was halted in Q3, due to the uncertainty over possible budgetary constraints. The financial update in March allowed progress to resume with new posts being implemented with a fresh timetable of planned implementation being followed. While the final budget settlement was positive, it was not as much as envisaged in the Full Business Case so Forensic Services have developed an efficiency programme – from the next financial year, and this will secure the investment needed to deliver the implementation of the New Operating Model to an adjusted timetable.

Since October 2019 – when the Drug Driving aspect of the Section 5A of the Road Traffic Act 1988 came into force in Scotland – there has been a significantly higher demand for testing and analysis of blood samples than had been forecast.



Because of this, outsourcing of drug-driving cases was implemented and additional instrumentation funded by the Scottish Government. In spite of these actions, 447 cases (from October 2019) were unable to be progressed to prosecution.

As a result, in June 2022 HMICS were commissioned by the Chair of the Authority to conduct an Assurance Review on the process for drug driving offences. HMICS published their report in April 2023. While Toxicology has made good progress in the past year – delivered through the Toxicology Development Plan, additional support for the team, and further support from Scottish Government for outsourcing – these have provided additional capacity to make improvements. There are ongoing discussions with partners and Scottish Government about the future sustainable model for Toxicology.

Among the high-profile cases Forensic Services worked on during 2022-2023 was the murder of Brenda Page in Aberdeen in 1978 by her former husband, Christopher Harrison, who was then 82. In March 2023 he was found guilty of the murder after a 10-day trial and was sentenced to life with a minimum period of 20 years before he would be eligible for parole.

Extensive work was carried out by Forensic Services experts in many scientific disciplines in Biology, DNA, fibre examinations, Chemistry, Mark Enhancement and Fingerprints. DNA samples were subjected to re-processing as technology moved pace over the years.

In September 2022, William MacDowell, 80, was sentenced to life in prison with a minimum of 30 years in September 2022 for murdering his lover and their three-year-old son in the Highlands in 1976. In February 2023, Mr MacDowell died whilst in prison. The bodies of Renee and Andrew MacRae have never been found. The Aberdeen scientists and the Cold Case Review Team (who reviewed the case in 2018) carried out several phases of work on this case over the years including DNA and hair examinations. Chemistry, Fingerprints and Mark Enhancement work was also carried out.

This has been a busy and demanding year with a strong performance which Forensic Services will now build on as we implement our New Operating Model.

A handwritten signature in black ink, appearing to read 'Fiona Douglas', written over a white background.

Fiona Douglas  
Director of Forensic Services SPA

# Forensic Services Logo



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**The new bilingual Forensic Services logo and visual identity has been developed by the Police Scotland/SPA graphic design team to reflect how we deliver world-leading forensic science from the crime scene to the court.**

The logomark is based around a series of open concentric rings which illustrate how the number of different specialisms in Forensic Services work together under a common umbrella. The concentric circles represent a puzzle or a code that needs to be solved. They also relate to the focusing of a microscope or the scope of a firearm target and also hints at fingerprint marks – all of which are of central importance in forensic science.

A clean, simple and minimalist approach has been taken for the visual identity which is suited to an organisation of highly-trained and skilled scientists and professionals. Inspiration for the logo, layouts and visual treatment has been drawn from the Swiss graphic design movement.

Swiss design, developed around the mid-twentieth century, is characterised by clarity, order, and a clean visual language free from ornamentation. They attempted to remove all that was unnecessary and emphasize only the essential elements. It is a style of design that favours minimalism – which is suited to the clean and clinical environments where Forensic Science is practised.



# Post Mortem Toxicology transfers to Forensic Services after £6m investment in state of the art laboratory

**Post Mortem Toxicology transferred from the University of Glasgow to SPA Forensic Services on 1st December 2022 after a Scottish Government £6 million investment in new laboratory facilities in Glasgow.**

Project Weaver had been set up to manage the transfer of the 23 high-trained skilled and specialist staff transferred under TUPE – Transfer of Undertakings (Protection of Employment) – to their new state-of-the-art laboratory.

This was a major achievement, given the high degree of complexity involved in Post Mortem Toxicology and the challenges of working to a fixed date, while still delivering the legacy contract.

Welcoming the new service, Fiona Douglas, Director of Forensic Services, said: “The transfer of the Post Mortem Toxicology Service marks an important milestone for Forensic Services, delivered with a £6m investment in staff and new laboratory facilities by the Scottish Government.

“The Post Mortem Toxicology team are highly-trained skilled scientists and staff who will be a superb addition to Forensic Services.

“This transfer was achieved thanks to extensive joint working between Forensic Services, Police Scotland, COPFS, SPA, Scottish Government and the University of Glasgow and I want to thank everyone who helped in delivering this so successfully.”

This project was an excellent example of the benefits of partnership working with Scottish Government, Police Scotland, Scottish Police Authority, COPFS, University of Glasgow, Trades Unions and an external project management provider, all working effectively to achieve the common goal.

After the staff induction of the 23 staff, their focus was on the development of new scientific methods and in particular for alcohol analysis. This test was the final method which was signed-off in February 2023 and a successful recommendation for accreditation by UKAS was granted on 29th March 2023.

The integration of the Post Mortem Toxicology with Forensic Services also brings further potential benefits including: a holistic forensic response to Police Scotland and COPFS: Real-time integrated intelligence: A single point of co-ordination to support drugs deaths initiatives; and enhanced career opportunities for existing and transferring staff.



## Biometrics Commissioner praises ‘world-leading service’

**The statutory Code of Practice prepared by the Scottish Biometrics Commissioner Dr Brian Plastow and approved by the Scottish Government came into force from the 16 November 2022. All members of SPA and Police Scotland staff are required to comply with the code and Forensic Services played a key part in the development of this Code of Practice.**

The Code of Practice seeks to promote good practice, transparency, and accountability in Scotland by setting out an agreed framework of standards for professional decision-making which strikes the right balance between the needs and responsibilities of policing and our criminal justice system in terms of enforcing the law and keeping citizens safe, and the fundamental obligation to guarantee the basic human rights, privacy, and freedoms of individual members of the public.

It was developed following extensive and ongoing consultation and is structured around 12 Guiding Principles and Ethical Considerations to which Police Scotland, the SPA, and PIRC must adhere to when acquiring, retaining, using, or destroying biometric data for criminal justice and policing purposes in Scotland. These principles and ethical considerations form the basis against which compliance with this Code of Practice will be assessed.

At the meeting of the Authority in November 2022 Dr Plastow said: “Forensic Services offer one of the most advanced DNA interpretation and analysis capabilities in world policing.” He added that Forensic Services deliver these “world-leading service” with “real openness and transparency”.

Forensic Services will continue to work with Dr Plastow to ensure we use biometric data in a manner which is ethically responsible, legislatively compliant, and respects the rights of individuals – while at the same time facilitates its use in the investigation and resolution of crime.

# Our Strategic Approach

**Our Forensic Strategy sets out our aspirations for service excellence as we seek to continue delivering world-leading, high-quality and value-for-money forensic services which better meet the needs of our criminal justice partners, and the expectations of the Scottish public.**

We are faced with the dual challenge of applying scientific analysis to increasingly complex and resource intensive investigations while also facing increasing levels of demand in relation to the provision of forensic services.

Our Forensic Strategy recognises the unique responsibilities placed upon the organisation as the provider for forensic services to the criminal justice system in Scotland. Forensic Services provide the vital services that form the basis of a transparent, impartial, fair and evidence-based legal system.

Ensuring Forensic Services has the right ICT infrastructure in place will be a key focus during the implementation of this strategy. We have faced a continual challenge of ensuring we are able to fulfil our vital responsibilities as a forensic service provider while being supported by an aging infrastructure and systems.

Key partnerships will be vital to support us in achieving our ambitions in this strategy. We are committed to strengthening our existing relationships with partners to support the sharing of knowledge and expertise that allows us to deliver scientific results and solutions from complex incidents.

We recognise that our highly-trained and qualified people are our most important asset, and we are committed to ensuring that they have readily accessible support to empower them in their roles. The health, safety and wellbeing of our people is a priority and we will ensure that the appropriate resources are available to offer support and guidance. We recognise that leadership skills and development opportunities are important to our people. We will ensure the service has fair and clear career pathways to support mobility throughout the organisation, and create enhanced professional support resources to invest in the development of all our people.

Implementation of our strategy and the key changes ensure we continue to deliver exceptional value in the scientific services we provide to our partners, and fulfil our key role in the Scottish justice system for the people of Scotland.



## Our Values

Integrity, Professionalism, Impartiality

## Our Purpose

To provide excellent, innovative forensic services to support justice in Scotland and keep our communities safe and protected

## Our Vision

Scientific excellence for safer communities

## Strategic Outcomes

Our people are supported through a positive working environment, enabling them to provide excellent forensic services

We are sustainable, adaptable and prepared for future challenges

We deliver high-quality, ethical services; and lead in order to advance forensic science

We work collaboratively with partners to serve the needs of the public and Criminal Justice in Scotland

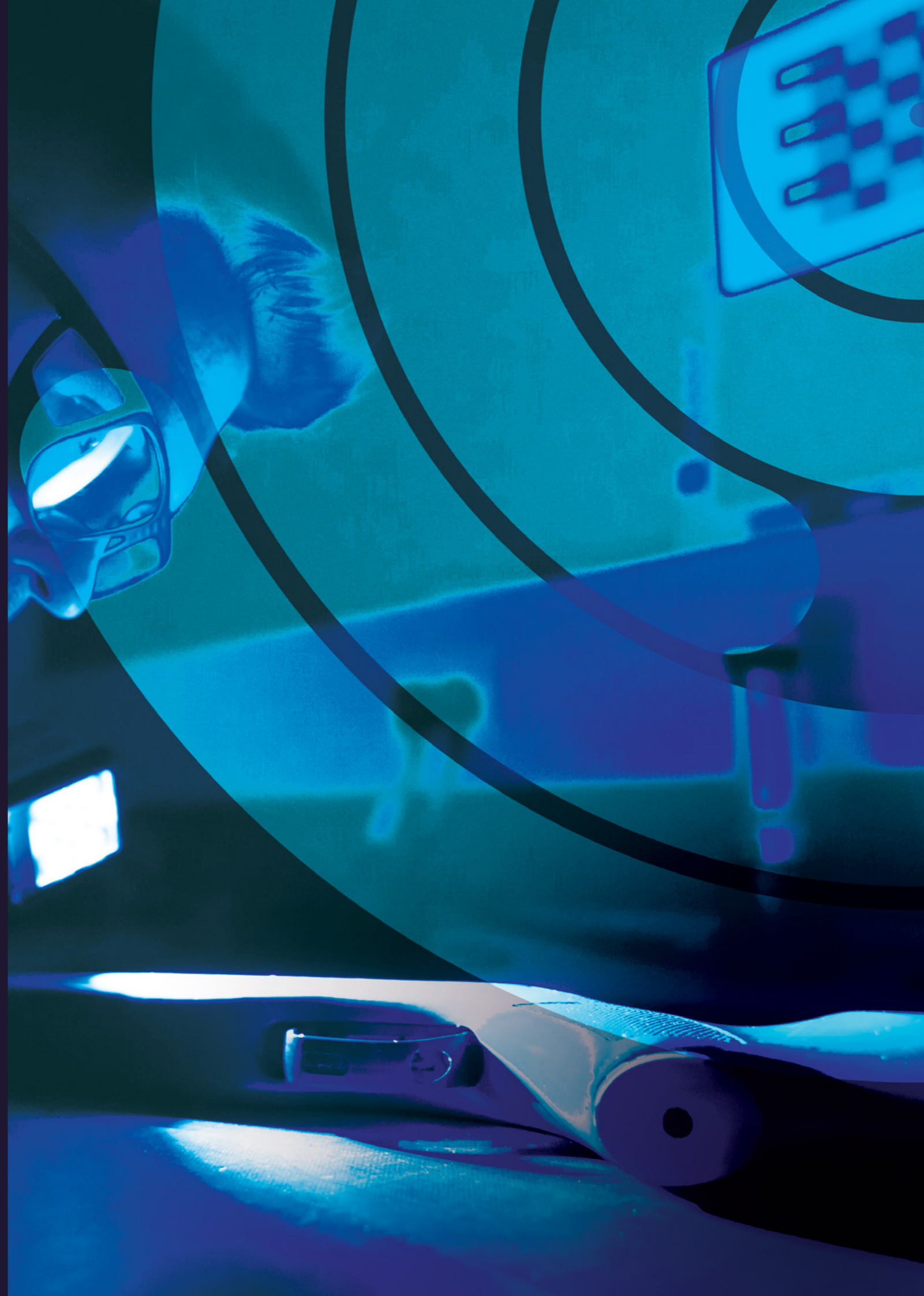
# Our New Operating Model

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Across Forensic Services we have now started implementing our New Operating Model. Forensic Services are widely recognised as a scientific leader who employ the latest technologies and have obtained quality accreditation by the United Kingdom Accreditation Service (UKAS) for more than 20 years. To make the best use of this vast experience and expertise, an efficient operating model is required to release the potential of our 600 highly-trained and skilled staff.

From the crime scene to the court, the New Operating Model is designed to deliver an effective, efficient and robust a service to our customers and partners. We hope that, with continuing development and innovation, the service provided will continue to be world-leading – and to be a service of which Scotland can be justifiably proud.



# Forensic Services Capabilities

**The services provided by Forensic Services will be delivered through three main capabilities.**

**The first capability, Search & Recovery, is based both at the crime scene and in the laboratory. Analysis is based only at the Scottish Crime Campus and Dundee while the Reporting Capability, will be based at the four main sites, ensuring a local delivery of results.**

## 1. Search & Recovery

Search & Recovery is to be delivered from 13 sites throughout Scotland including in the laboratory at all four sites. Those sites are: Aberdeen; Dumfries; Dundee; Edinburgh; Glasgow (Govan); Glasgow (Maryhill); Glenrothes; Inverness; Kilmarnock; Livingston; Paisley; the Scottish Crime Campus (Gartcosh); and Stirling.

Scene examination is delivered using two roles to efficiently deal with acquisitive and serious crime. A Forensic Scene Examiner attends crimes of an acquisitive nature and the Senior Scene Examiner concentrates on more serious crime and will also attend other incidents when appropriate.

In the laboratories, teams of Forensic Examiners carry out recovery of evidence, examinations, test and processes in the laboratory, as instructed, to defined standards and report the factual outcome (generated by an instrument or from a limited set of outcomes) either internally or externally. In addition, Senior Forensic Examiners can also undertake relevant examinations at scene incidents, as tasked, to locate, develop, preserve, record and gather forensic evidence for use by internal and external customers, and advise the customer at the scene and prepare reports/statements for external customers

## 2. Analysis

The Analysis capability meets the requirements of the service to identify substances or individuals. This capability receives samples recovered from the scene through direct submission or from the laboratory and employs different techniques to identify the drug types or process DNA for identification. DNA Analysis and Drugs Analysis are both based at the Scottish Crime Campus and Dundee laboratories. For both types, samples will be split between the two sites, primarily based on geography but having both sites allows flexibility ensuring that fluctuations in demand can be met. Using two sites maximises the use of automation and future proofs the service.

The Scottish National DNA Database is also based in Dundee. As well as being used to detect crimes, DNA analysis can be used in paternity testing and also body identification. In some instances, the analysis capability will receive DNA samples via direct submission, which is a new process for the delivery of samples into Forensic Services. This reduces the time it takes from the collection of the sample to a completed result.

Tenprints, Livescan and Footwear Intelligence, which is based at the Scottish Crime Campus, now sits within the Analysis capability. Fingerprint forms taken from individuals are analysed and added to the national IDENT1 database. Maintenance of the database and necessary weeding of forms is an essential part of this team's activity and from 2023 footwear intelligence has now been incorporated in to its function.

## 3. Reporting

The Reporting capability is composed of multi-disciplinary teams of Forensic Scientists and Senior Fingerprint Examiners that will be responsible for the setting of forensic strategies, case assessment and interpretation (where appropriate), and the reporting of results. There will be Reporting Teams at four laboratory sites (Aberdeen, Dundee, Edinburgh and the Scottish Crime Campus) and this enables Forensic Services to provide a local service to the police and court system.

Many scientists in the Reporting Teams will also attend at serious incidents to provide expert advice and guidance as well as carrying out scene examination, analysis, and interpretation to maximise recovery of evidence and assist with criminal investigations.

The Reporting capability is also home to the Forensic Operational Leads, who have an outward-facing role acting as a national forensic science lead and provide support and co-ordination of the Forensic Services response to the investigation and review of specific major incidents and sensitive enquiries. The Forensic Operations Lead will act as a single point of contact for partners and will provide advice and guidance to Senior Investigating Officers and enquiry teams.



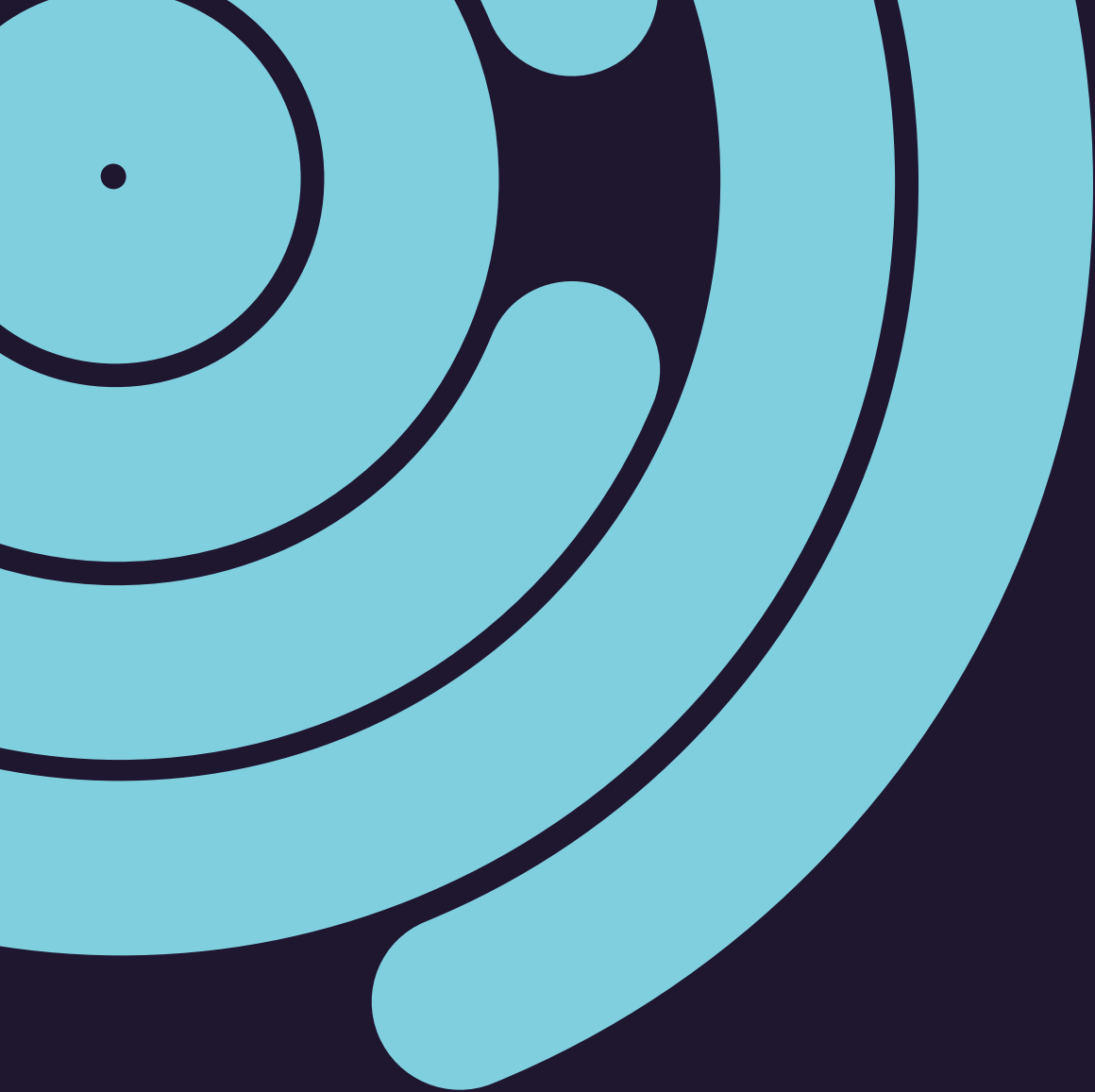
# Benefits of the New Operating Model

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- Forensic Services are more cost effective and are utilising our skills and resources efficiently
- The improvements in resilience are helping us to meet changing demands and justice priorities
- We are delivering enhanced reporting capabilities
- We are driving improvements in Research and Development in Forensic Science
- Our management are now enabled to support Staff improving wellbeing and greater emphasis on people management
- Our staff are empowered and have a greater sense of value by being upskilled and in the “right role at the right time”
- Staff have improved career path opportunities
- The new structure allows us to enable and empower our colleagues to expand their abilities and skills through multi-skilling, improved training and development
- We are maximising the benefits of local delivery of serious crime forensic services
- We are providing faster delivery of intelligence
- The response times for non-serious crime scene attendance has improved
- Our dedicated senior scientific role is providing enhanced service delivery in the most serious incidents
- We are providing an improved service to COPFS and Courts
- We are enabling Police Scotland to improve use of police resources
- Our communities have an increased confidence in the criminal justice system
- We are delivering early detection and prevention of recidivist criminality as result of our faster delivery of intelligence results
- We are supporting the community through delivery of results protecting the innocent by aiding and assisting in creating a faster justice process.
- We are delivering added value benefits across the public sector (e.g. health care)







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