



<b>Meeting</b>	<b>Forensic Services Committee</b>
<b>Date</b>	<b>10<sup>th</sup> August 2023</b>
<b>Location</b>	<b>MS Teams</b>
<b>Title of Paper</b>	<b>Forensic Services Performance Report – Year-end report</b>
<b>Presented By</b>	<b>Fiona Douglas</b>
<b>Recommendation to Members</b>	<b>For Discussion</b>
<b>Appendix Attached</b>	<b>No</b>

**PURPOSE**

To present Forensic Services Performance Report, FY 2022/23 for Committee consideration.

This paper is presented in line with:

- The Scottish Police Authority Scheme of Delegation

This paper is for discussion.

## **1. BACKGROUND**

- 1.1 The Forensic Services Performance Report is presented for financial year 2022/23.
- 1.2 This report captures conducted activity across SPA Forensic Services. This performance evidence also informs the content of the Authority's quarterly Strategic Police Plan Delivery Review and the Annual Review of Policing 2022/23.
- 1.3 The report demonstrates SPA Forensic Services delivery over the past year through the following:
  - Progress updates on Forensic Service commitments laid out in the annual business plan;
  - Qualitative performance data.

## **2. FORENSIC SERVICES PERFORMANCE REPORT – YEAR END**

2.1 Report appended.

## **3. FINANCIAL IMPLICATIONS**

3.1 There are no financial implications in this report.

## **4. PERSONNEL IMPLICATIONS**

4.1 There are no personnel implications in this report.

## **5. LEGAL IMPLICATIONS**

5.1 There are no legal implications in this report.

## **6. REPUTATIONAL IMPLICATIONS**

6.1 There are no reputational implications in this report.

## **7. SOCIAL IMPLICATIONS**

7.1 There are no social implications in this report.

## **8. COMMUNITY IMPACT**

8.1 There are no community implications in this report.

## **9. EQUALITIES IMPLICATIONS**

9.1 There are no equality implications in this report.

## **10. ENVIRONMENT IMPLICATIONS**

10.1 There are no environmental implications in this report.

## **RECOMMENDATIONS**

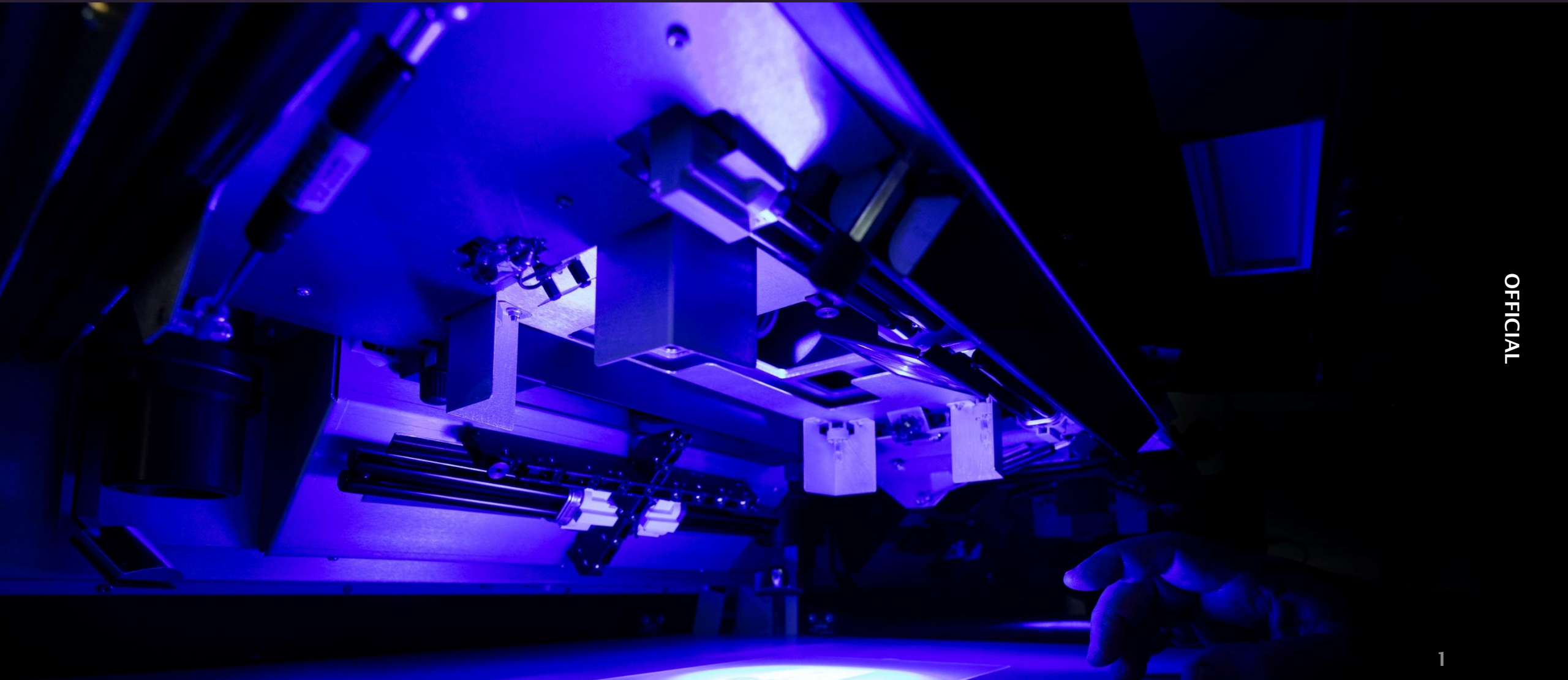
Members are invited to discuss the information provided in this report

# Forensic Services Performance 2022/2023

Year end report for the SPA Forensic Services Committee

FORENSIC SERVICES

SCOTTISH POLICE  
AUTHORITY



OFFICIAL

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Forensic Services have delivered significant performance improvements during 2022-2023 as a result of investment and change, planned and implemented over the past few years.

This past financial year has been the first in which output has exceeded demand significantly in 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 1<sup>st</sup> December. This was the culmination of excellent collaborative working across SPA/Forensic Services, Police Scotland COPFS and Scottish Government and is a major achievement given the complexity of the project. From the 1<sup>st</sup> December the focus was on the induction of the 23 staff and also the development of new scientific methods and in particular for alcohol analysis. This test was the final method was signed-off in February 2023 and a successful recommendation for accreditation by UKAS was granted on 29th March 2023.

In Q4, the Deployment of Scene Examination project was taken forward with the Tasking Unit posts filled which following an extensive training programme so this unit, which is based in Rushton Court, Dundee, would be ready to go live at the start of the next financial year on 3rd April 2023. A benefits realisation review will be undertaken, with consideration of implementation and performance, before the end of the calendar year, once the team has become embedded.

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.

At the meeting of the Authority in November 2022 Dr Plastow said: “SPA 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.

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 15 Nov 2001; Edinburgh since 04 Oct 2004; and Aberdeen since 01 July 2005.

At the start of the financial year the removal of some of the COVID restrictions allowed Forensic Services to start returning to more usual working practices. This included progress to a hybrid work pattern for those staff who were able to spend some days working from home. In spite of the on-going work restrictions from COVID the staff consultation phase of the New Operating Model was concluded.

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.



Forensic Services continue to support more than twenty Police Scotland cold case reviews of unsolved murder cases, some of which go back as far as the 1970s. The Forensic Services Cold Case Review Service works closely with Police Scotland to see if there are any new forensic science opportunities when the cases are reviewed.

In March 2023, Christopher Harrison, 82, was found guilty of the murder of his ex-wife Brenda Page in Aberdeen in 1978. The trial lasted 10 days and the jury only took a few hours to reach their verdict. He 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. Lead Scientist Chris Gannicliffe and DNA scientist Andrew Gibb gave evidence at the High Court in Aberdeen.

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.

The forensic evidence led in court focused on carpet from the boot of Renee's BMW car, which in 1976 had been shown to bear a small blood stain. The application of modern blood enhancement techniques using luminol examination identified that in fact the carpet was been more widely blood stained than originally thought, probably the result of efforts made to clean up the original blood stain after deposition. Lead scientist Chris Gannicliffe gave evidence at the High court in Inverness.

# Quality overview

## UKAS ISO 17025 Compliance:

The UKAS Surveillance (Su1) Assessment of Forensic Services commenced 11 Oct 2022 and finished on 30 Nov 2022.

Accreditation was recommended to be maintained subject to submission of appropriate evidence with a re-visit in Mar 2023 and July 2023.

UKAS confirmed the maintenance of Forensic Services accreditation to ISO 17025 on 12 May 2023. This is the 25th consecutive year of UKAS accreditation at Forensic Services.

UKAS granted Extension to accredited Scope to ISO 17025 for:

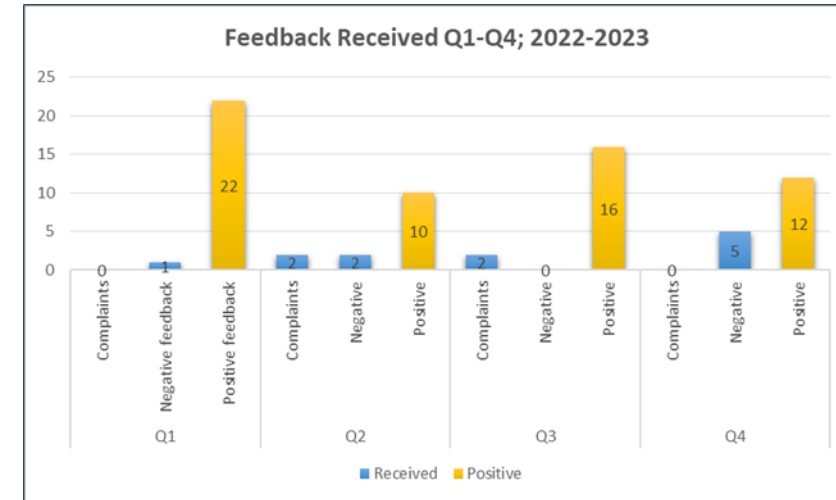
- Quant Trio – SCC
- SEM FDR – SCC

UKAS recommended accreditation to ISO 17025 for the J24, Post Mortem Toxicology site and the analysis of alcohol as stated on the submitted AC4 following assessment 28-29 March 2023.

## Forensic Services Management System Compliance:

At the bi-annual Forensic Services Management System Review meeting it was concluded that the Forensic Services Management System remains fit-for-purpose against the requirements of the ISO 17025: 2017 standard and ILAC G19, with demonstrable improvement across many areas. Improvements have been noted in several areas highlighted at the last meeting.

The next phase of the Quality Improvement work plan will continue to drive improvements in quality and assurance within Forensic Services.



Numbers of recorded Complaints and Negative Feedback remain low.

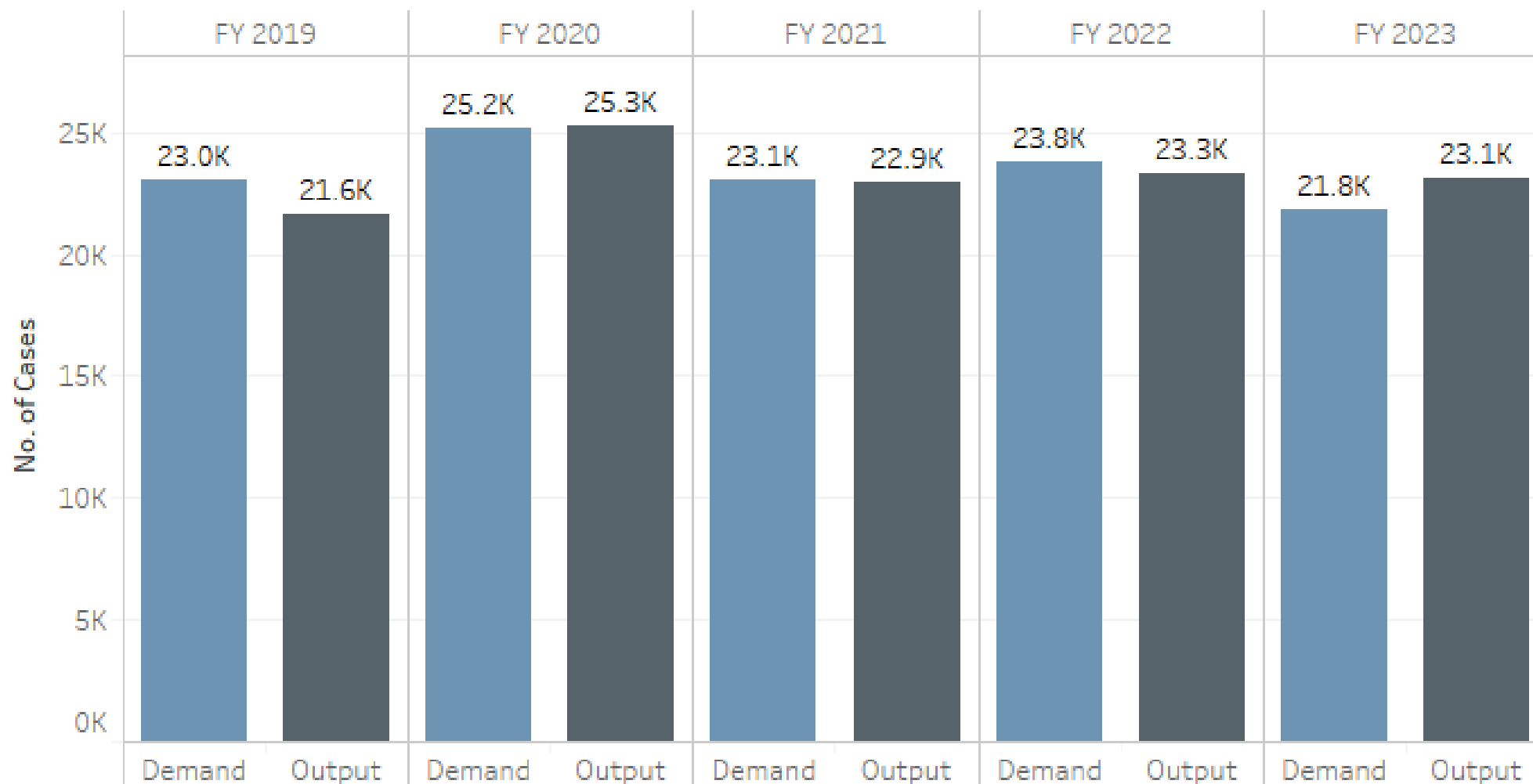
Management System Review found that close out of complaints and negative feedback in a timeous manner was not in line with the SOP.

The immediate investigative action is taken but records within the Management System Q-Pulse application were not up to date.

New targets were agreed with Senior Managers and will be monitored as improvements through the Forensic Services Effectiveness Monitoring Procedure.

# Demand and output – five-year trend

## Laboratory Case Demand and Output (by fiscal year)

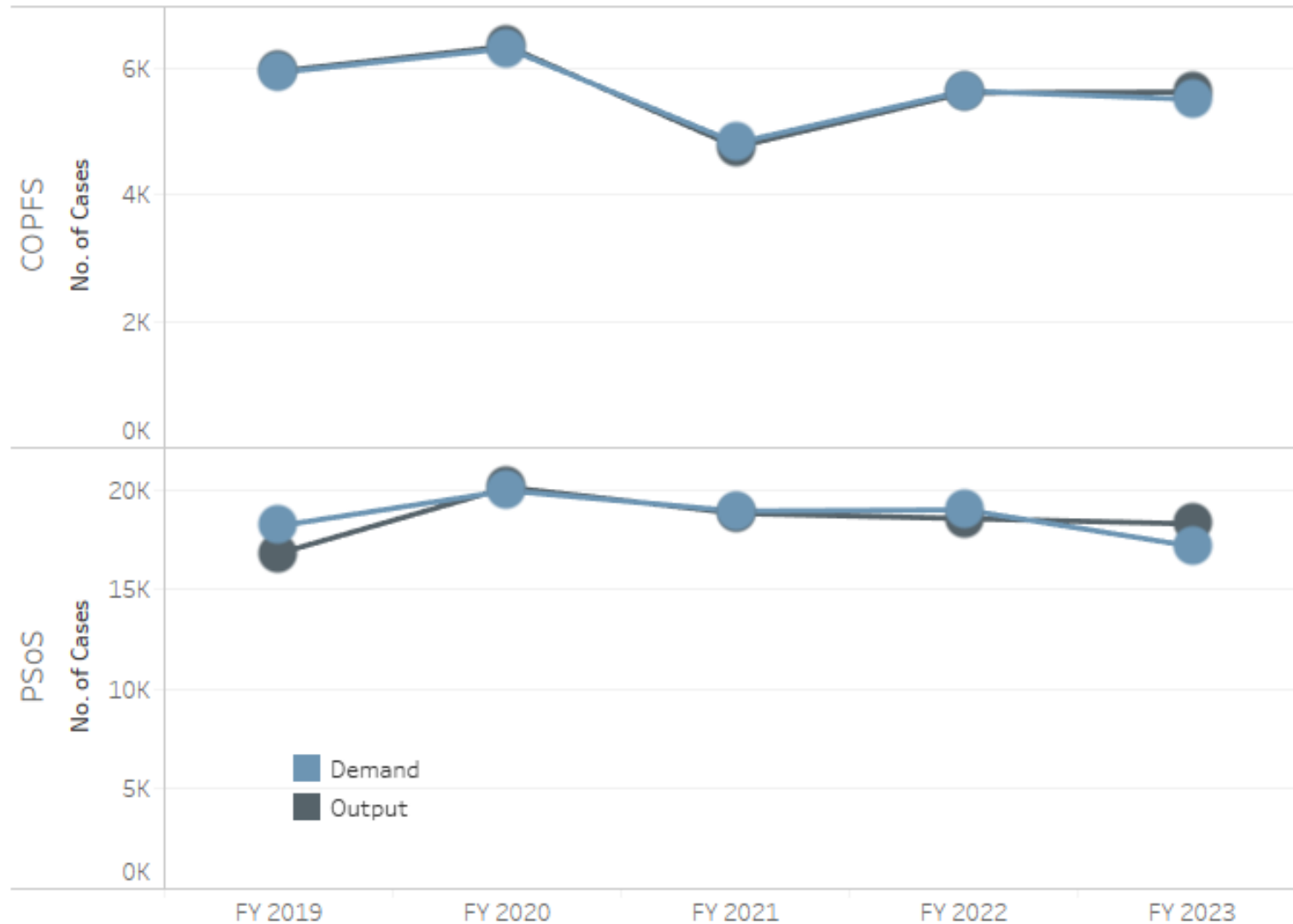


Financial year 2022-2023 is the first year that output has exceeded demand significantly.

Future workforce planning will allow resource redeployment into areas where demand and capacity are out of balance.

# Demand and output – five-year trend

Customer Demand and Output (by fiscal year)



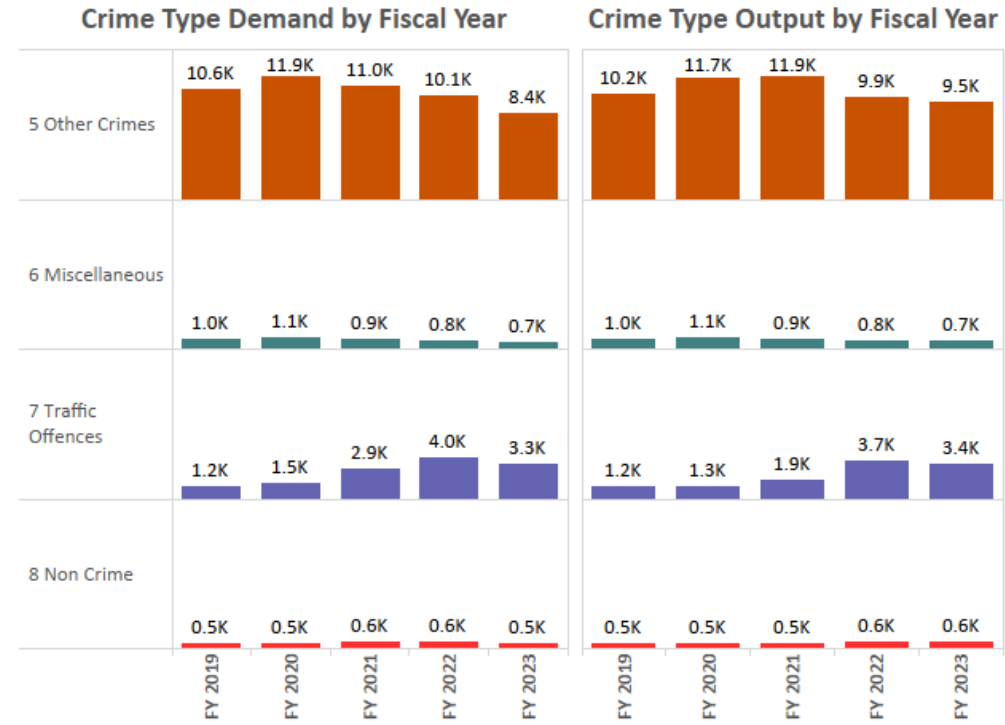
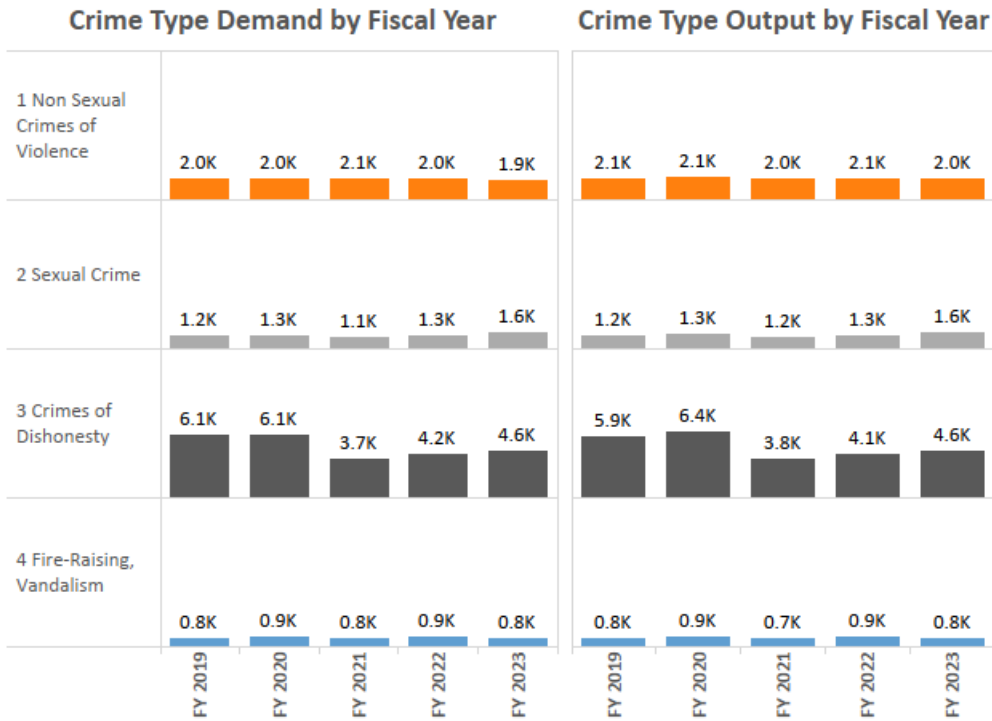
Forensic Services have delivered significant planned improvements during the past year.

In the financial year 2021-22 demand and output were less aligned. Changes made with capacity and performance monitoring now shows that capacity exceeds demand in the majority of business areas.

The proportion of submissions from COPFS remains stable at c. 25-30%.

However, demand in relation to sexual crimes has risen year-on-year.

# Demand and output by crime type



Groups 1 (Crimes of Violence), 4 (Fire raising and vandalism), 6 (Miscellaneous, predominately drugs deaths) and 8 (non-crime) such as sudden, suspicious and unexplained deaths have remained relatively stable over the previous five years.

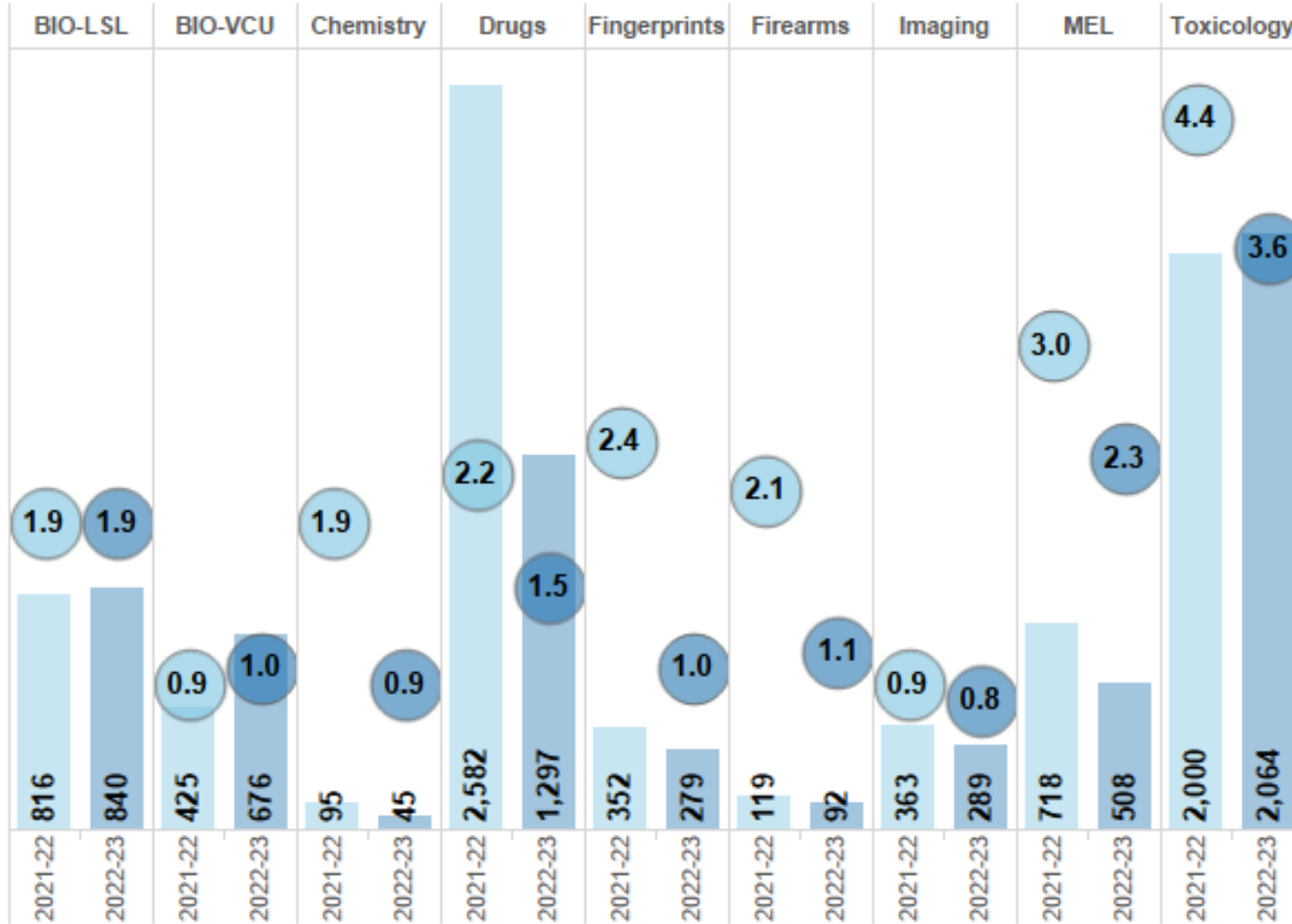
Group 2 (Sexual crime) continues to rise year-on-year with an increase of c.20% from 1200 to 1500 cases over the past two years.

Group 3 (Crimes of Dishonesty) reduced during the pandemic, mainly due to people being at home. While it has increased it is still below pre-pandemic levels. It is expected that this will increase during the coming year.

The caseload for drugs (Group 5 crime) is the lowest for many years and is around a third of the level of a year ago. Reducing the case pressure on the team has improved wellbeing and reduced the service delivery times - which provides faster intelligence and reporting.

# Active caseload and case age

Active Caseload and Ageing



Open case profile per unit for end of each fiscal year. Bar charts represent number of cases and circles represent average age in months for open casework.

There has been a 20% reduction in the overall number of open/active cases from the last financial year to this year.

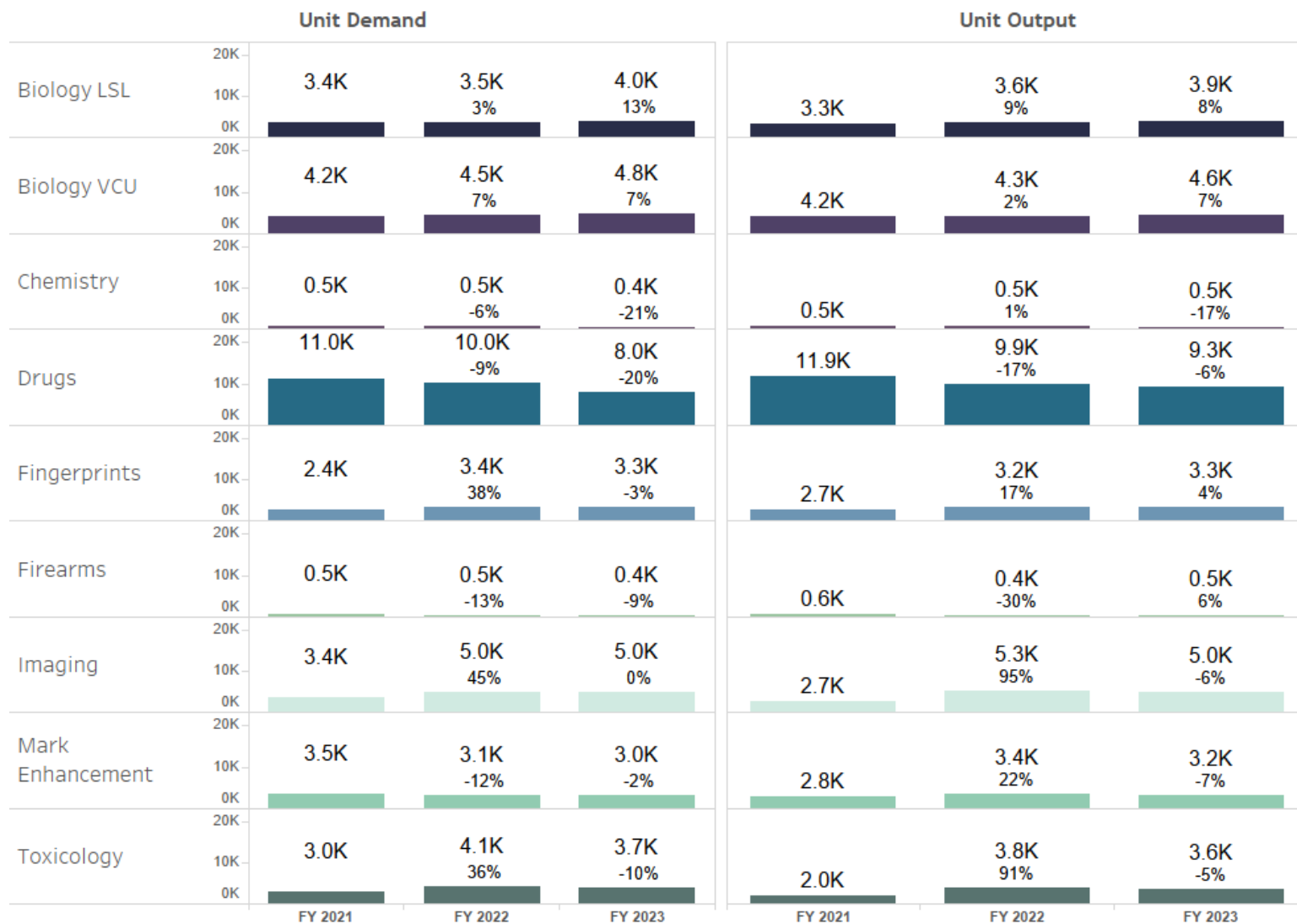
In all units, except volume crime, there has been a reduction in the average number of months a case has been open. This is significant for chemistry, drugs and fingerprints where staff resilience and demand reduction has improved service delivery.

The demand in Biology and Volume Crime has once again seen an increase. In spite of some resourcing challenges, the age of the cases within the system remained static.

Toxicology is fairly static with a reduction in age of cases in the system (significant proportion of cases are outsourced).

# Demand and output by department

Laboratory Unit Case Demand and Output (by fiscal year)

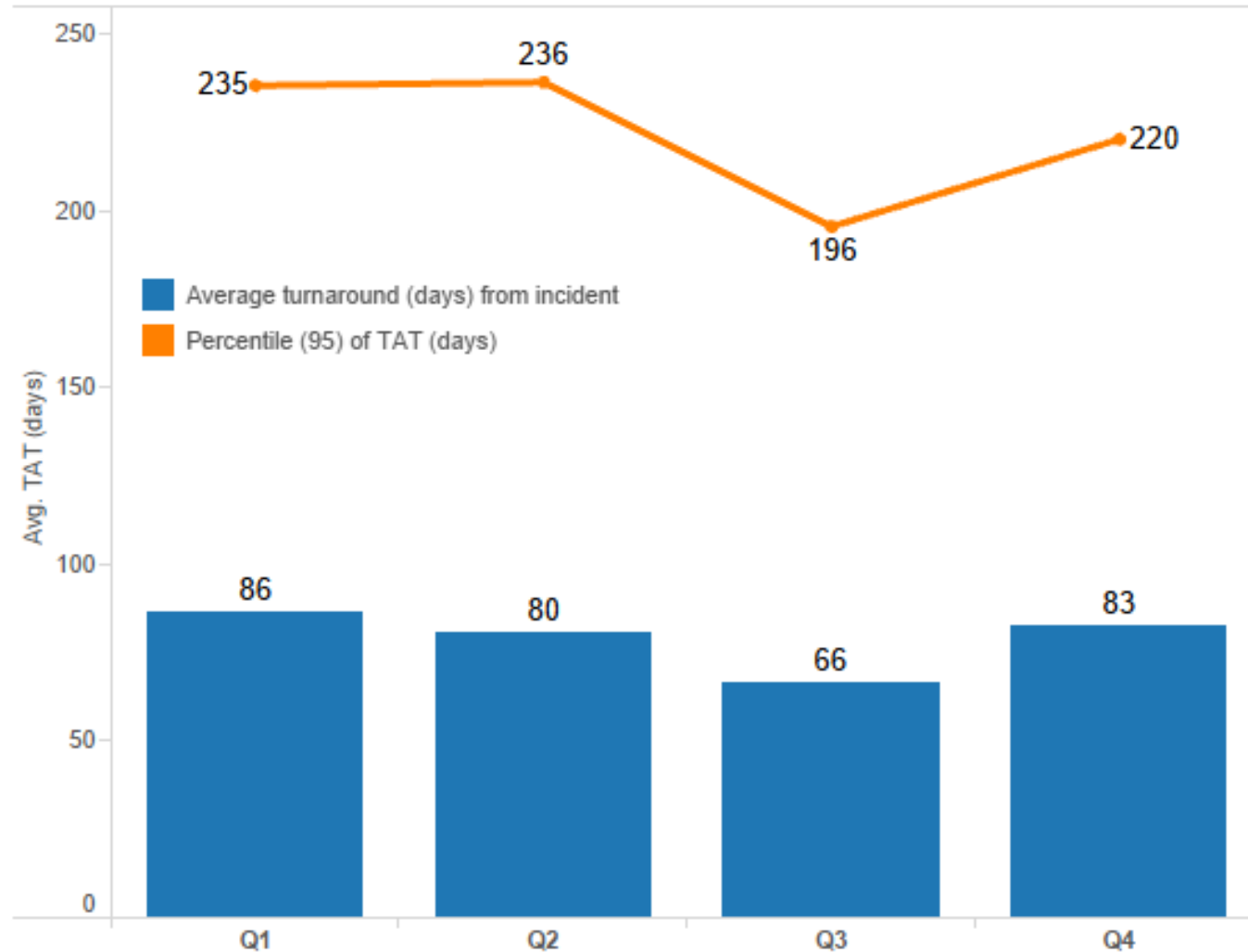


Biology and Volume Crime unit have seen an increase in case submissions for the third year. Resources are expected to be diverted to this business area to ensure work compliance and resilience is maintained.

A 20% reduction in drugs demand accounts for a significant proportion of Forensic Services overall demand. It is not expected that this will rise to 2020-21 levels. There has been a comparable reduction in Chemistry, however the case numbers in this unit are lower.

## Mark Enhancement - Investigative turnaround times

average no. of days for cases to be reported, measured as monthly average, and as 95% of monthly cases



The Mark Enhancement recovery plan has been active for about seven months. In that time there has been a reduction in open casework by 30% (c.200 cases).

Improved triaging of cases, reduction in drug demand, and increased output through performance monitoring has all contributed.

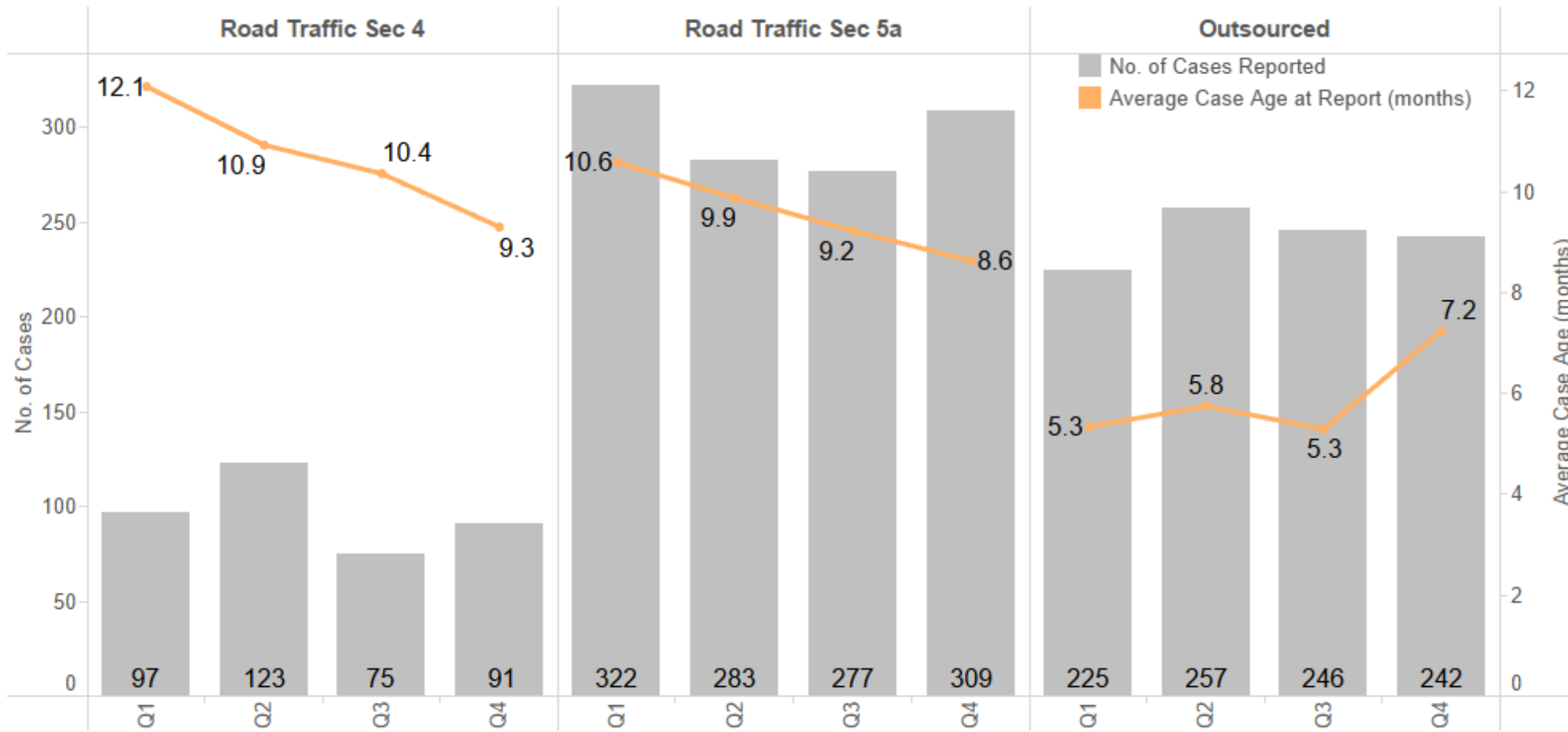
There are fewer old cases in the system. Targeting these has reduced the case age by 23%.

Future plans should reduce the timeliness further to provide real-time intelligence information.



# Drug Driving overview

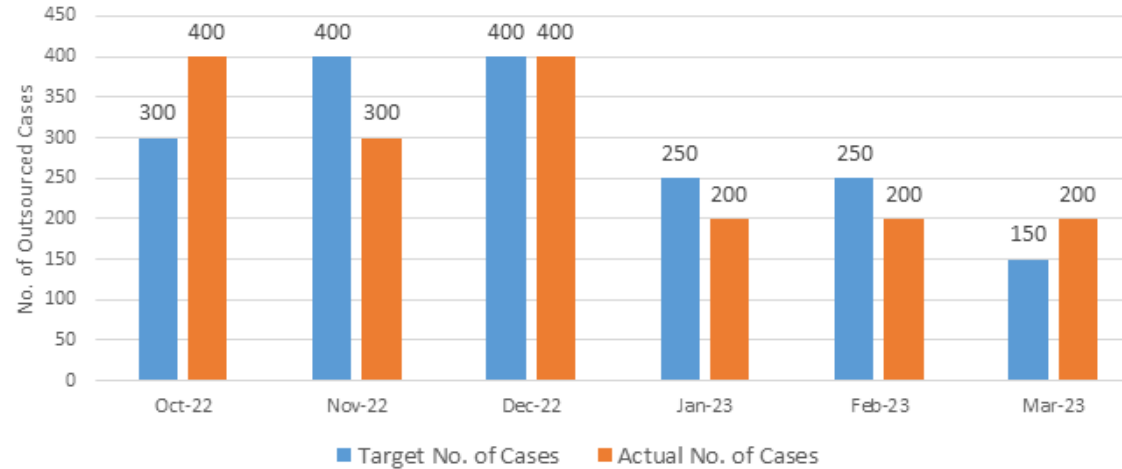
Toxicology - Drug Driving Case Output and Age 2022-23



Toxicology has delivered a significant improvement in the past year. With the advent of a Toxicology Development Plan significant additional support for the team, and additional funding from Scottish Government for outsourcing has provided the space for the improvements to service.

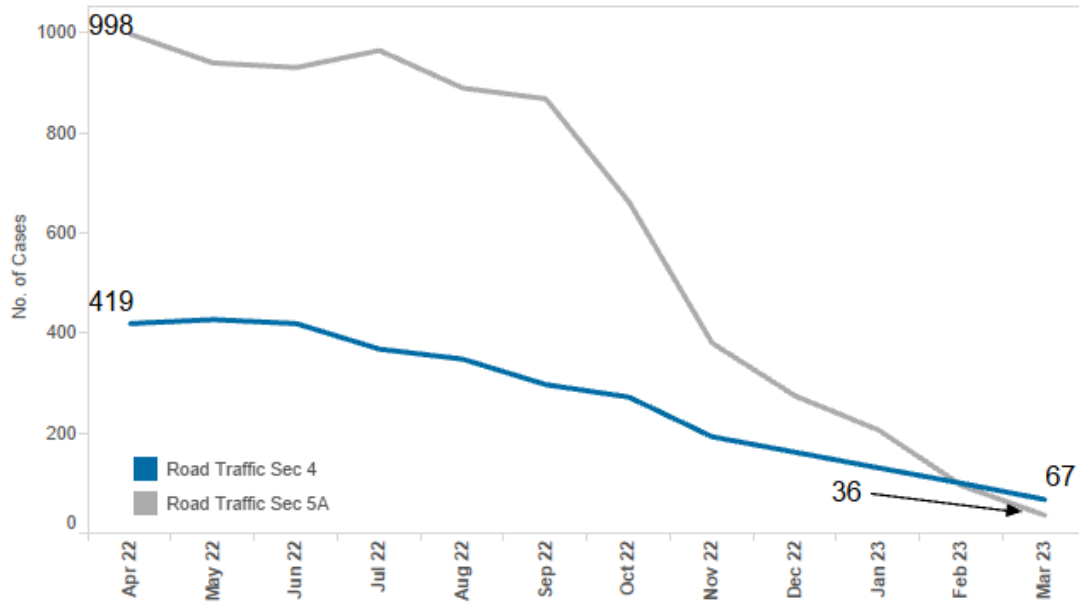
Dialogue about a long-term sustainable model continues with partners and Scottish Government.

# Drug Driving overview

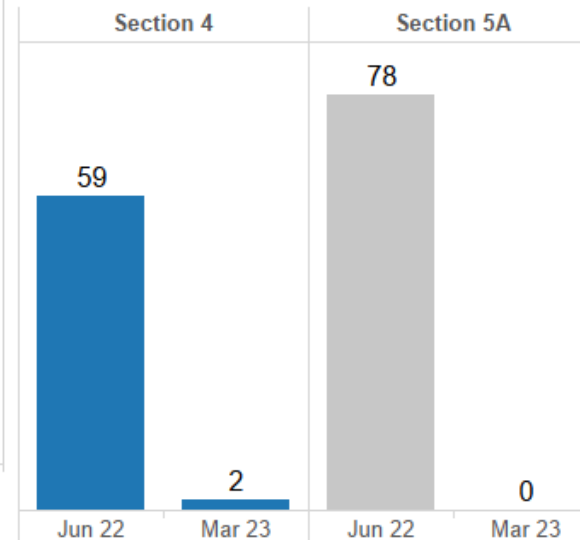


Recent (October 2022) use of new case codes allows visibility on the number of outsourced cases submitted to the external Forensic Services provider.

Open Drug Driving Caseload (for in-house analysis)



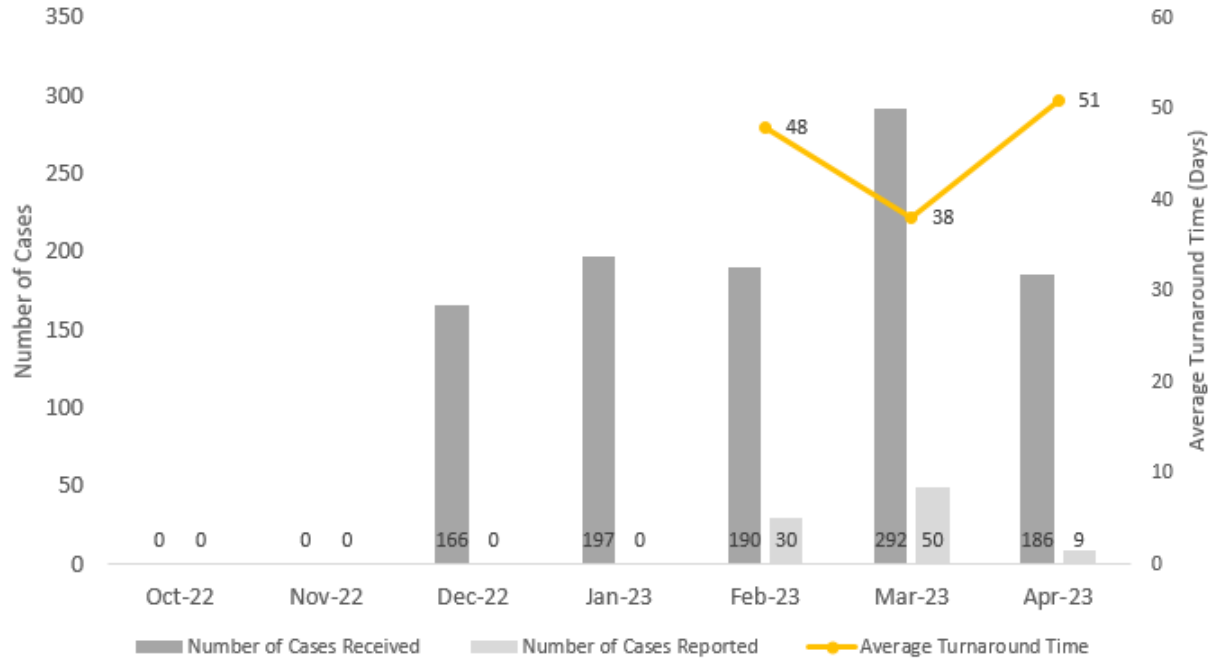
Cases Approaching Statutory Time Limit (no. of open cases dated 42 weeks or more from incident)



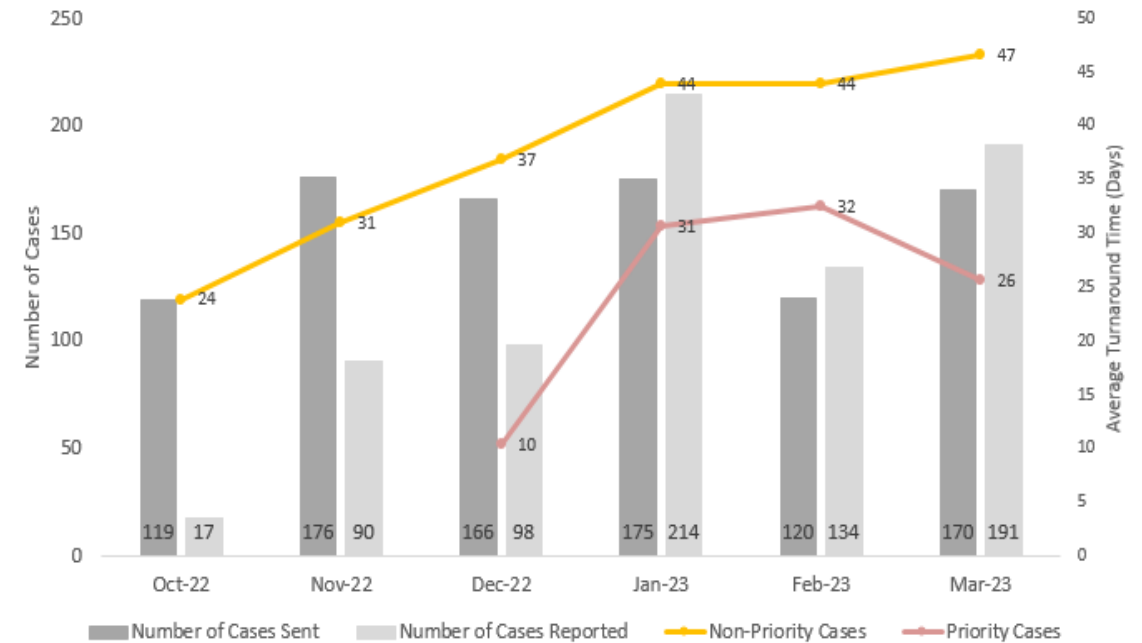
This has contributed to the significant reduction in the overall open caseload.

# Post Mortem Toxicology overview

Number of Cases at SPA Forensic Services



Number of Cases Outsourced



Post Mortem Toxicology services transitioned to Forensic Services on 1<sup>st</sup> December 2022 through the successful delivery of Project Weaver. Initial weeks/months focused on the induction of all new staff members (23) and the writing, and implementation, of a new branch of the Quality Management System.

In addition, the method development and validation activity have been ongoing with the Alcohol test signed-off on the 10<sup>th</sup> February 2023 - allowing reporting of the first cases. A successful recommendation for accreditation by UKAS was granted on 29<sup>th</sup> March 2023, pending provision of actions raised. Since then 89 alcohol-only post mortem toxicology cases have been reported by Forensic Services.

Sequential analysis is required for the testing of drugs in post mortem casework - with a minimum of three further tests followed by another 1-6 different tests. To date, the validation of five of 10 tests has been completed and analysis of casework samples has started. The scientific method development and validation has been delayed due to delays earlier in the Project. Estates snagging work and the networking the instrumentation both took significantly longer than expected, resulting in a number of months of delays. Validation of the outstanding methods will though be completed in Q1 2023 which will then allow all post mortem casework to be progressed and reported.

An outsourcing contract between COPFS and external post mortem toxicology suppliers has been in place during implementation to reduce the risk to service delivery and this outsourcing has continued. The number of cases outsourced and reported is shown above and it is anticipated that outsourcing will end in the summer.

Due to the ongoing validation activity and the capacity for outsourcing, there has been an impact on turnaround times for the more complex cases. This has increased from an average timeliness of <2 months to 4 months. It is anticipated that this will return to <2 months by the end of summer 2023. Engagement with COPFS and pathologists has continued throughout this transition to ensure that service levels are monitored and clarity on reporting timeframes over the period through to steady state.

Post mortem toxicology results are included in the annual statistics of deaths published by Scottish Government with data from the National Records of Scotland (NRS). Forensic Services continue to work closely with COPFS, Pathologists, NRS and Scottish Government to prioritise this activity.

Forensic Services prioritises scene attendance requests taking into account:

- Crime/event type
- Risk of loss of potential forensic evidence
- Presence of a Police Scotland Crime Scene Manager (generally more serious scenes)
- Skills and competence required by the attending Scene Examiner
- Impact on Police Scotland resource (e.g. Police Officer standing by)

Scene Examination resource level may influence the attendance timescales/sequence but does not affect the prioritisation.

All incidents where a Police Scotland Crime Scene Manager is deployed, other serious crime, critical incident scenes, and those requested by the PIRC are always defined as higher priority.

Less serious crime scenes will be prioritised taking into account:

- Restricted availability of victim/complainer/accused.
- Proximity to other existing scene requests
- Risk of loss of potential forensic evidence.

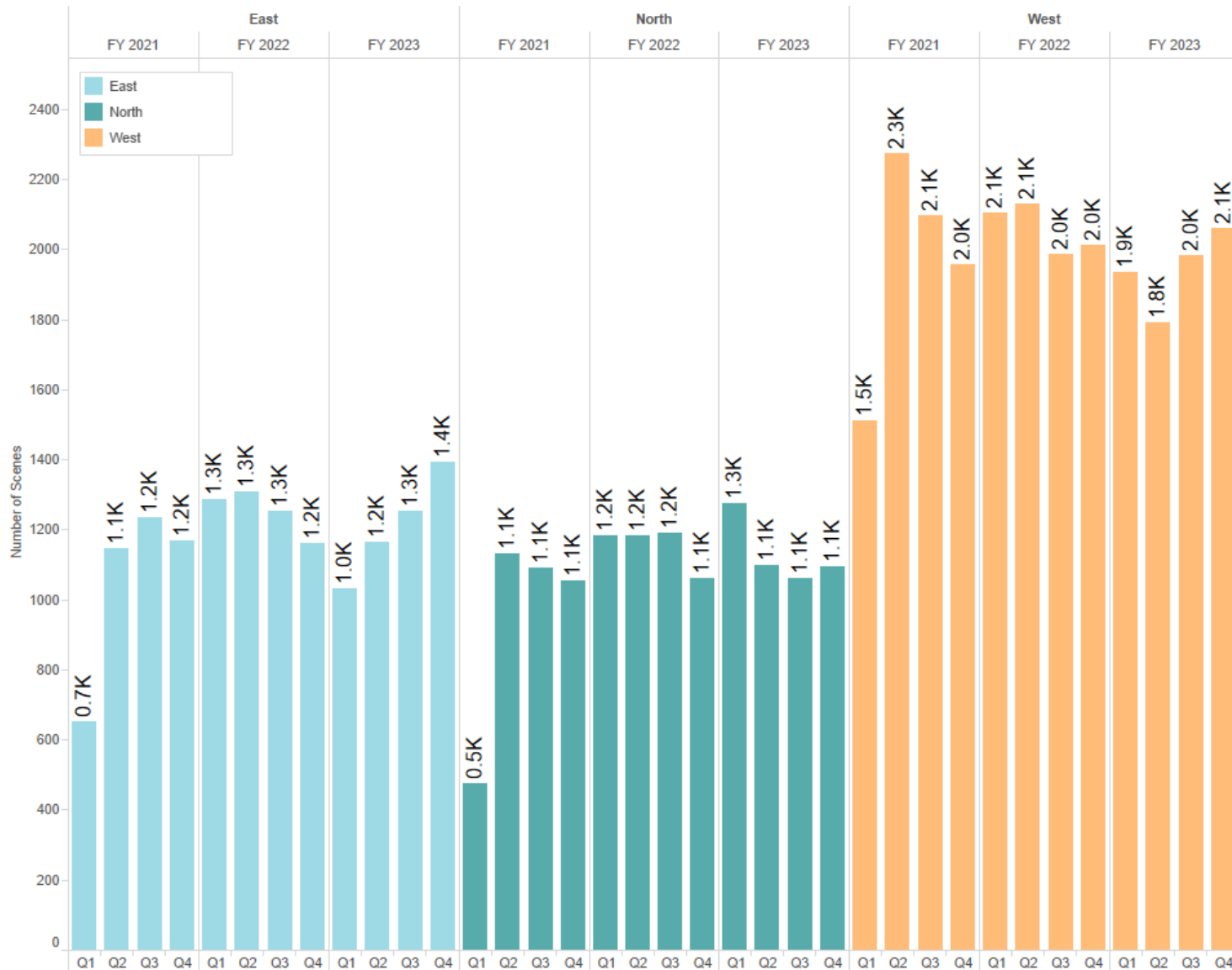
We also prioritise scenes where the public are affected to try to minimise disruption, such as scenes relating to:

- Common stairs
- Streets/paths

We prioritise other attendances, such as post mortems to support the small team of pathologists to maximise their efficiency.

Lower-level crime scenes, which generally result in limited forensic value, are not routinely attended unless Police Scotland demonstrate potential for forensic evidence recovery.

# Scenes attended overview



Attendance requests in the East have steadily increased and are at the highest level for the past three years.

An initial spike in Q1 for the North has stabilised.

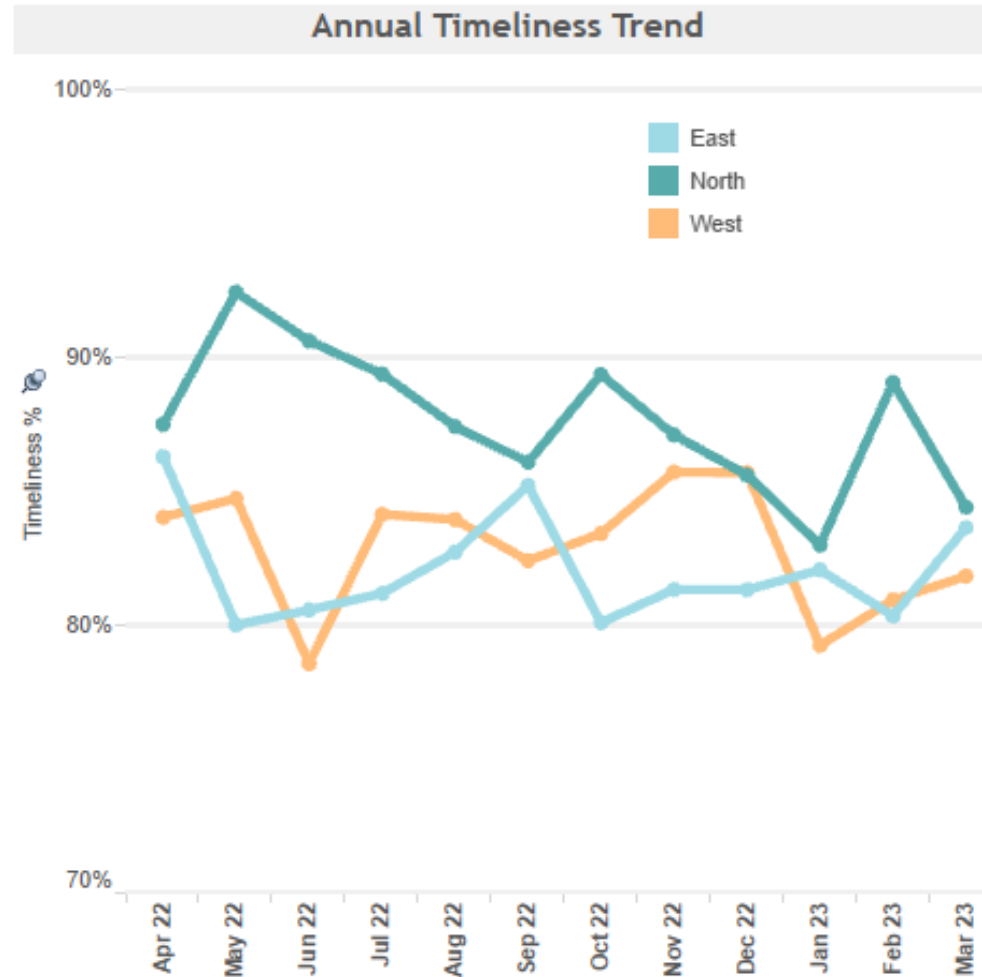
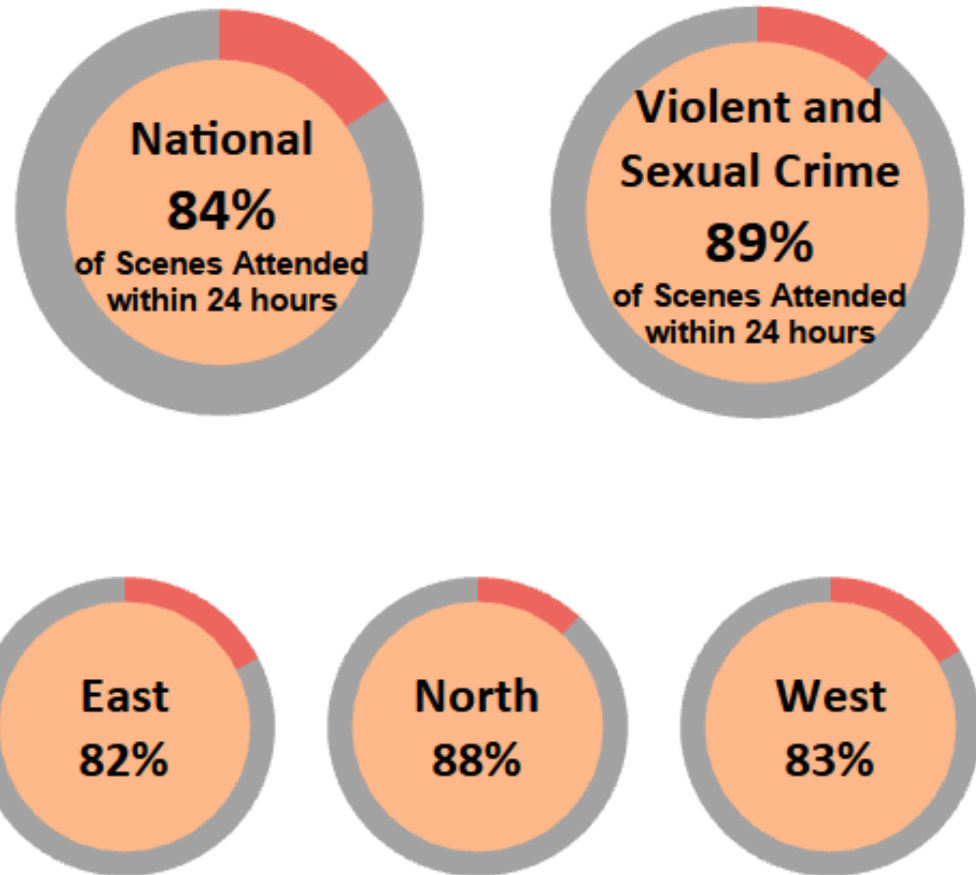
The demand in the West fluctuates - hence the requirement for staff resilience, as their demand accounts for both the East and North combined.

Work regarding the consistency of attending the same types of scenes is ongoing between each of the command areas. The greatest difference has been achieved in the West.

The introduction of the triaging by the National Tasking Unit will help deliver consistency.

# Scenes attended overview

## Timeliness Scenes attended within 24hrs of request 2022-23

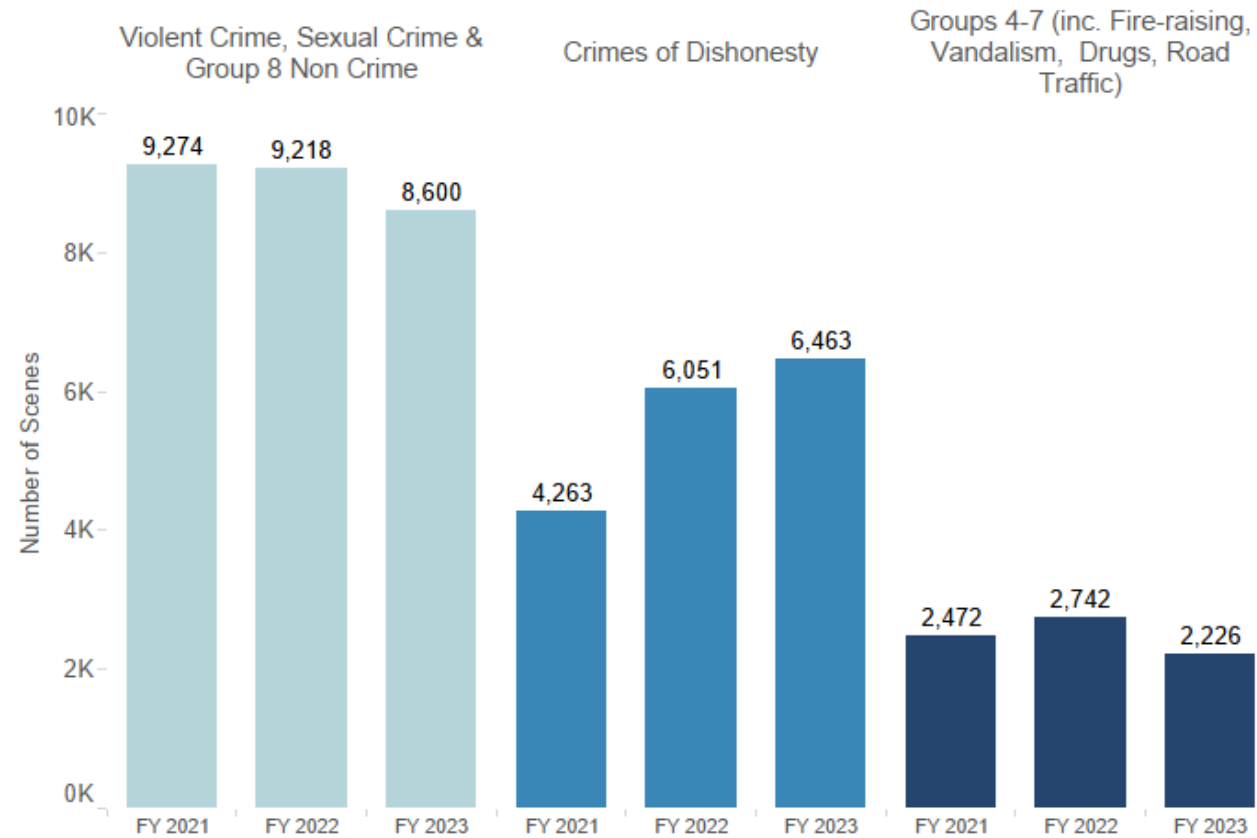


Changes to the new way of working has affected the timeliness compared to the previous financial year as had been expected.

The new processes and staff structure are likely to return benefits and a change to this from October onwards.

# Scenes attended - overview

### Scene Attendances by Crime Series



### Scene Attendance Timeliness

