



# New forensic facility

The AFP's new forensic facility will be a powerful world-class weapon against crime in the ACT, across Australia and around the region.

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When the AFP's new forensic facility is operational by late 2015 it will revolutionise the way forensic science and technical intelligence is delivered in Australia.

Construction of the new facility is anticipated to commence in late 2013, and to be completed by mid-2015. The new building will be the first instalment of the AFP's Majura Master Plan development. The new complex will meet the needs of forensic and technical intelligence operations of the AFP for the next generation and beyond.

"It will be the first of its kind in Australia," National Manager Forensic and Data Centres Julian Slater says. "And it will be pretty much the first of its kind in the world. I think it is going to be a game changer for the way we do our business."

## Increasing demand

Currently located at Weston, Forensic and Data Centres (FDC) comprises a large number of specialist forensic

An artist's impression of the AFP's new 199 hectare Forensic and Data Centres facility will revolutionise forensic science and technical intelligence in Australia.



disciplines. It also accommodates important technical intelligence centres such as the Australian Bomb Data Centre and the Australian Chemical, Biological, Radiological and Nuclear (CBRN) Data Centre. It is the sole provider of forensic science and technical intelligence capability to the Commonwealth. It will be one of only two fully integrated forensic capabilities in Australia.

But the existing facility no longer meets the rapidly increasing demand for forensic services. Established in 1980 in leased accommodation, it was extensively refurbished and expanded in 2000 by converting car parking space into laboratory space to meet the increasing needs of forensic science. The facility was further refurbished in 2007 mainly to accommodate the Australian CBRN Data Centre into the FDC portfolio. Upgrading and further extending the existing facility was considered in order to meet

increasing demands; however, this did not represent value for money.

As a leased facility, long-term viability of tenure at Weston added to concerns. Encroaching urban development around the current facility will see the Weston site become increasingly incompatible with surrounding land use. Additionally, there would be the inevitable disruption to service delivery while the upgrade was conducted. All of this would be for a limited short-term benefit before a new facility would be required in any case.

An even more important consideration for the AFP is the limitation of the Weston facility to support the required forensic and technical intelligence capability, which can no longer effectively meet current or future FDC standards and requirements. The volume and complexity of the FDC's workload has been growing rapidly over the last decade. This trend is expected to continue.



Modelling has predicted a fivefold increase in case processing capacity over the life of the facility because of state-of-the-art improvements.

“The current facility is no longer fit for purpose,” Deputy Commissioner Close Operations Support Michael Phelan says. “We have outgrown the site and it is just not able to keep up with the current methodologies required for a current and modern forensics facility.”

## World-class solution

The Majura facility will change all that. Deputy Commissioner Phelan says “the new FDC facility will leverage off the new technology and new methodologies in forensic disciplines. This means greater benefits to the AFP, including ACT Policing.”

“Because this facility is purpose-built, we will not only be able to deal with those small-volume crimes but also be able to deal with the large-scale forensic activities that need to take place.”

The AFP’s submission to the Parliamentary Standing Committee on Public Works (PWC) highlights the quantum leap in capacity the Majura facility will deliver. The new facility will provide FDC with increased capacity so that several complex examinations can occur at the same time. Alternatively, a complex examination can occur in parallel with more routine casework. The significant increase in capacity at the new forensic facility will

be achieved through the use of an integrated ‘search precinct’, and the use of the latest technologies.

## Benefits

The new FDC facility at Majura will enable a collaborative forensics model where all scientific disciplines will be able to come together, ensuring a more responsive and high quality outcome. Integration will allow the FDC field, analysis and intelligence capabilities to work better together, leading to more timely results and a greater contribution to the investigation of all crime types.

Bringing the full range of discipline specialists together to perform a collective assessment and initial processing of exhibits in a collaborative ‘search precinct’ will transform exhibit handling and harness evidence immediately. Due to the limitations of the current facility, exhibits need to be transferred back and forth from the exhibit store to the different disciplines involved. The evidence is examined in isolation by one discipline and then transferred to another discipline. This is done sequentially and in isolation from colleagues in other disciplines.

The time and procedural inefficiencies of this process are typical of the impact generally of the ever struggling facilities at Weston. At Majura, the

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search precinct will enable all disciplines to view evidence together, making a collective assessment of the analysis required, and the optimum process pathway for the exhibit.

Another major step forward made possible by a new facility is the use of significant contemporary forensic practices for the first time. This includes plans for specialist analysis of scientifically sensitive DNA samples such as ‘Low Copy Number DNA’, the culturing of micro-organisms, and trace-element profiling. These techniques require rooms that can be cleaned to rigorous scientific standards that the Weston facility is unable to achieve because of the ad hoc nature of its development and insufficient airflow control.

Internal modifications to the current facility will not rectify these contamination challenges. The AFP submission to the PWC stresses that delays in evidence processing are inevitable at Weston. Similarly, the risk of contamination or loss of forensic evidence is an ever-present concern – protecting against this requires layer upon layer of cumbersome, time intensive quality management processes.

“Experience from Victoria and overseas suggests that it is not a question as to whether those problems would emerge for the AFP, but rather when those problems will emerge...” the submission said. The new forensic facility has been specifically designed to address those challenges as well as providing flexibility to respond to emerging needs.

Low Copy Number DNA is a case in point. Analysing this sensitive form of DNA is now possible through advances in scientific knowledge. However, the incredibly small amounts of DNA used in this process make them extremely vulnerable to background contamination. The unsuitability of the Weston facility has meant that the AFP is unable to implement this and similar techniques and has on occasion



Above: The high-tech nature of forensics has outstripped the AFP facilities at Weston in Canberra.

outsourced forensic analysis of Low Copy Number DNA to New Zealand and the United States.

The innovations incorporated into the new facility, supported by work processes adapted to take best advantage of the new facility, provide the foundations for the Rapid Lab Process. Modelling conducted by Ernst and Young estimates reductions in processing time in the order of 60 to 70 per cent. This means reducing turnaround time for analyses from weeks to days.

Assistant Commissioner Slater says we have been trying to break down some of the barriers about the way people have thought traditionally on how a laboratory should be designed. “The approach used for the design of the new facility is very much like a very modern research laboratory rather than what is a stereotypical forensic laboratory.”