

## Training

Cellmark has a successful track record in the delivery of forensic training across a range of disciplines. This ranges from basic DNA awareness for CSIs to improve the quality of items recovered and submitted for profiling, to training laboratory staff in key skills such as presumptive testing, the recovery of body fluids, DNA mixture analysis, case assessment and statistical interpretation, Cellmark provides high quality training courses tailored to individual customer requirements.

### EXAMPLES

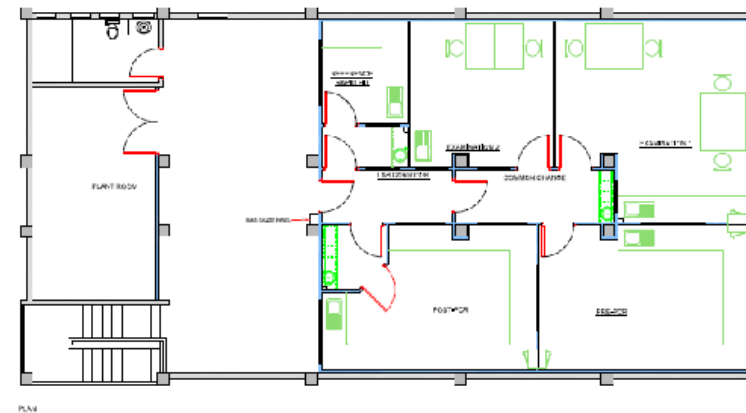
1. Delivered at our training laboratories in England, Cellmark provides a range of forensic courses for UK and overseas police and laboratory staff. An example training package was a bespoke 6 week course for 8 students from an overseas police force, including: forensic quality management; DNA item examination; DNA laboratory processing; and profile interpretation and mixture analysis.
2. Cellmark delivers training for drugs, toxicology, handwriting analysis, footwear, fires and damage interpretation into national & international CSI courses run by the British Army.
3. Cellmark's Forensic Anthropology & Archaeology Team provides regular body recovery/disaster victim identification training for the UK Military, ACPO UK DVI (Disaster Victim Identification) and the UK National College of Policing at Harperley Hall, Durham.

Our scientists are often requested to provide guest lectures at universities and international conferences, where we share our considerable experience and provide updates on the latest scientific developments in the field, including the results of our own R&D and from our scientific collaborations.



IDENTIFICATION  
INTERPRETATION  
INNOVATION

## FORENSIC CONSULTANCY SERVICES design, build, deliver, train, support



Specialist expertise  
supporting international police  
and military customers

IDENTIFICATION  
INTERPRETATION  
INNOVATION

## Introduction

More than a decade ago, Cellmark revolutionised the way that forensic laboratories were designed and built in the UK by introducing clean-room technology to assist with contamination control and to support the use of high-sensitivity DNA analysis techniques.

Cellmark has continued to develop its approach by designing, building and commissioning a series of facilities in the UK to accommodate the delivery of a wide range of forensic disciplines, creating more than 4,500m<sup>2</sup> of laboratory space.

Through its large team of experienced forensic staff, project consultants and partner scientists, Cellmark delivers a range of forensic consultancy services to police and government agencies in the UK and overseas. In addition to laboratory design and building project consultancy, we offer bespoke forensic training packages in a number of scientific disciplines, as well as training, mentoring and support in achieving ISO quality accreditation.

# FORENSIC CONSULTANCY SERVICES - design, build, deliver, train, support

## INFRASTRUCTURE CONSULTANCY - LABORATORIES

Cellmark offers extensive experience of constructing high specification forensic laboratories suitable for the delivery of ISO17025 accredited evidence recovery and the provision of a range of forensic analytical services, including high-sensitivity DNA analysis. This covers the planning and design stage, project management (both on-site and remote) of the facilities installation, the commissioning of HVAC air handling systems, IT infrastructure and laboratory equipment, testing and validation sign-off for laboratory use, plus ongoing maintenance and monitoring to ensure that the facilities remain within specification.



### History of forensic laboratory construction:

- 2004 DNA crime scene stain laboratory
- 2005 High throughput DNA reference laboratory (mouth swab)
- 2006 Specialist high-sensitivity DNA facility
- 2006 Design and oversight of 1,850m<sup>2</sup> laboratory build
- 2007 Forensic casework search laboratories
- 2009 Forensic casework search laboratories
- 2010 Chemistry and microscope laboratories
- 2010 Chemistry and biology search laboratories
- 2010 Forensic casework search laboratories
- 2011 Toxicology lab build and additional search capacity
- 2011 Forensic casework search laboratories and SEM room
- 2012 Forensic chemistry search laboratories
- 2013 Forensic consultancy, design and validation for British Army
- 2014 Forensic reagent manufacturing and chemistry search laboratories
- 2015 International forensic consultancy, design and training project



## CASE STUDY - AFGHANISTAN

Cellmark was commissioned to provide design and consultancy services for the construction, workflow design and equipment fit-out of a multi-unit, stand-alone forensic DNA facility for use by the UK military in Afghanistan. Using novel construction techniques and unique design approaches, Cellmark was able to meet the challenging requirements of designing a clean-room forensic facility suite to be used in a hostile environment which would be used for processing reference samples as well as crime scene samples. The facility provided for item examination and DNA recovery, full pre- and post-PCR separation, clean-room air handling as well as data storage, processing and DNA profile interpretation.

Following the success of the initial project, a second, smaller facility was commissioned by the military for which Cellmark was again asked to provide consultancy services. The facility was awarded the Queen's Award for Enterprise in the Innovation Category in 2013.

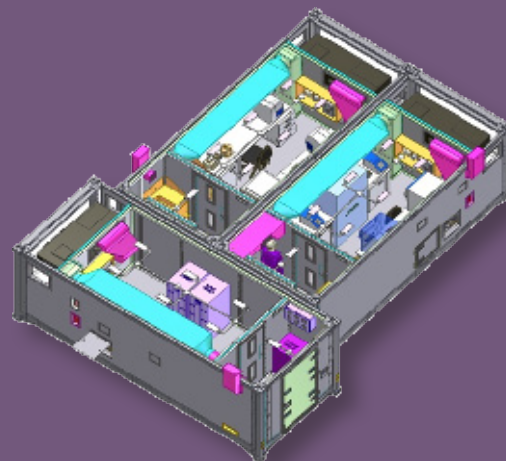
## CASE STUDY - ABU DHABI

Following an international competitive tendering exercise, Cellmark was invited to support the expansion and accreditation of the Abu Dhabi Police DNA Database laboratory through an ongoing consultancy contract.

All project milestones for achieving ISO17025 accreditation in Al Ain were successfully delivered and the ADP laboratory was awarded ISO17025 accreditation by the UK Accreditation Service in March 2013.

## CASE STUDY - PAKISTAN

Under a contract awarded by the UK Foreign and Commonwealth Office, Cellmark provided on-site support to staff at the PFSA including: consultancy in forensic toxicology; training in body fluid identification and recovery; DNA profiling process development; and provided an ISO17025 pre-audit assessment with associated advice.



## INFRASTRUCTURE CONSULTANCY - SYSTEMS

We provide in-country consultancy for the selection and implementation of forensic laboratory and National DNA database software. Cellmark's sister laboratory BODE has developed a suite of DNA laboratory software and we have experience of working with other commercial off-the-shelf Laboratory Information Management Systems (LIMS) and database software solutions. Through our UK software development partner and our own IT Systems Support and Programming teams we can provide consultancy for software selection, implementation and development as well as user training. DNA database solutions may be for intelligence, crime investigation, disaster victim identification (DVI), missing persons, the protection of vulnerable people or for staff elimination purposes.

## INFRASTRUCTURE CONSULTANCY - ACCREDITATION

Cellmark's forensic DNA service was first accredited to ISO17025 in 2000, and we have continued to extend the scope of accreditation as new services have been developed and introduced. Cellmark's extensive ISO17025 scope of accreditation for forensic laboratory services (including DNA analysis) is detailed on the UK Accreditation Service (UKAS) website (Lab No. 2045).

We hold accreditation/certification to ISO 17020:2004 (Forensic Analysis at Crime Scenes); ISO 9001:2008 (Quality Management System); ISO 14001:2004 (Environmental Management); ISO 27001:2005 (Information Security Management); and Cellmark has been an accredited supplier of DNA profiles to the UK's National DNA Database (NDNAD) since 1998.

With a strong history of quality accreditation, Cellmark has an experienced Quality Management team who provide training and consultancy and who have been successfully involved in projects both in the UK and overseas to support the achievement of ISO17025 accreditation. We provide assessment advice, quality management training, QMS and procedure review, as well as ISO17025 preparedness audits. From one-off training courses to on-site support we can assist with achieving and maintaining accreditation to international quality standards.