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Working faster to solve terrorist crimes

The Defence Science and Technology Laboratory's (Dstl) new explosion debris processing facility will enable faster and safer sifting of wreckage to identify crucial forensic evidence which could help solve terrorist crimes.

Dr Garth Shilstone, Forensic Explosives Laboratory (FEL) Group Leader, says: "Sifting through tonnes of debris left in the wake of an explosion is not an easy job, but it is vital in order to gather forensic evidence that could point to the cause of the explosion."

Staff from Dstl's FEL team, based at Fort Halstead near Sevenoaks in Kent, have many years experience in analysing debris from explosion scenes and have played an important part in providing forensic evidence in various terrorist trials such as the London 7/7 bombings.

Dr Shilstone adds: "This updated facility provides FEL with a modern capability to effectively search explosion debris for items of forensic significance in a safe and environmentally considerate manner."

The new facility has two separate process lines, each with a mechanised drying and screening process, force ventilated search cabinets and the means for capturing waste material that could have an effect on the environment.

Dr Shilstone continues: "The two process lines means we have the capability to keep one line as a back-up or use both for the quick and efficient processing of large quantities of debris."

Dstl staff specified the outline requirements of the new facility with an emphasis on operator health and safety and the environment. The new debris processing facility is made up of commercially available equipment, saving both on cost and maintenance.

How it works

1. Debris is put into a drying machine and slowly tumbled
2. The dried debris is then transferred to a screening machine which separates it into three different sized grades. Debris is graded to assist visually in the search process
3. The three different grades of debris then pass to the forensic examining room
4. Forensic technicians hand search the debris in ventilated search cabinets. These cabinets are ventilated so that any remaining contaminated dust is removed
5. Technicians can use three different coloured inlays for the worktops, which helps visually in the search process
6. While going through the debris, technicians look for items that appear to be alien to the environment from which they have been recovered and that therefore could be of forensic interest
7. The final decision on which items to further examine is taken by the lead FEL case officer.

The new facility was demonstrated as part of Lord West's, Parliamentary under-secretary of state for security and counter-terrorism, visit to Fort Halstead on Friday 27 November. The Home Office funded the production of the new facility as the majority of FEL's work is for the Home Office.

Lord West said: "This new facility, funded by the Home Office, provides FEL with a modern capability to quickly and effectively search explosion debris for items of forensic significance in a safe and environmentally considerate manner. This is a national capability and a key tool that will enhance the ability of the criminal justice system to bring perpetrators of terrorism to account."

ENDS

For more information contact the Dstl press office on 01980 658088, 07766 134768, press@dstl.gov.uk.

For information on Home Office involvement with FEL, please contact the Home Office newsdesk on 020 7035 3535

Notes to editors:

Dstl

The Defence Science and Technology Laboratory (Dstl) is a centre of scientific excellence for the Ministry of Defence (MOD). Its 3,500 strong workforce includes some of the nation's most talented and creative scientists with the brief to ensure that the UK Armed Forces and Government are supported in-house by the very best impartial scientific and technological advice. Dstl's position at the heart of the MOD means that its advice is trusted by governments, academia, industry and international partners. It offers timely and accurate advice at all levels of military planning and operations, both overseas and on the home front. For more information please visit www.dstl.gov.uk

Forensic Explosives Laboratory (FEL)

The Forensic Explosives Laboratory (FEL) is a world class forensic science laboratory based at the Dstl site Fort Halstead in Kent. The team of experts provide a specialist explosives investigation service for the Police Forces of Great Britain, other government agencies, and foreign governments by request. It operates a system whereby a scientist is available on-call 24 hours a day, 7 days a week to assist the police and to receive possible explosives related items. FEL can provide attendance at the scene of the explosion, laboratory examination, advice, support, safe recovery and packaging and forensic evidence. The history of the Forensic Explosives Laboratory started over 130 years ago following an explosion in the Patent Safety Gun Cotton Company at Stowmarket on 11 August 1871. Thus the FEL was the world's first forensic science laboratory. It now continues its good work under the guidance of the Dstl.