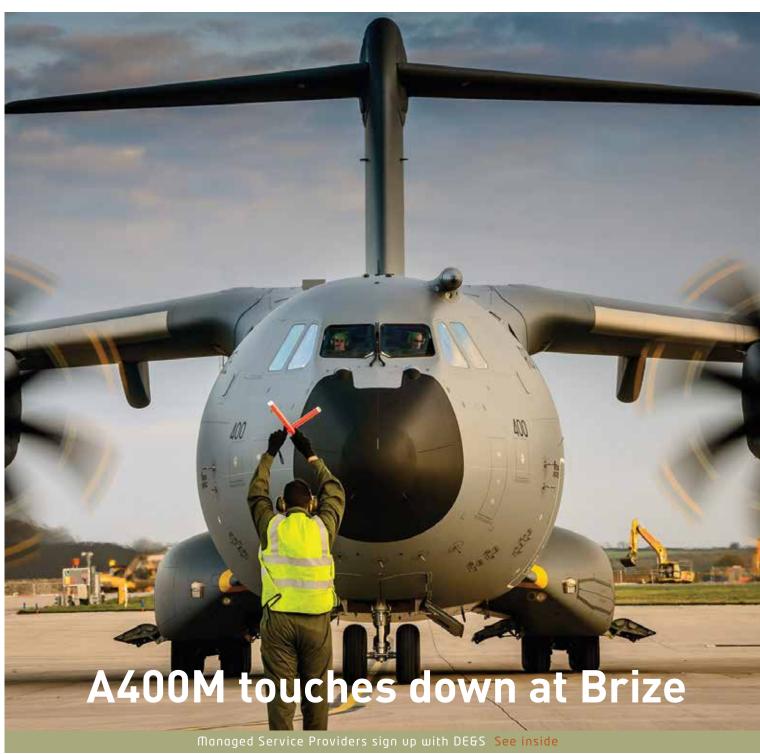
Dec 2014 Issue 79 the magazine for defence equipment and support



















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A set of defence co-operation contracts for the early phase of a joint development of Unmanned Combat Air Systems has been presented to industry partners by the UK and French governments in a ceremony in Paris attended by Bernard Gray, Chief of Defence Materiel

30 They gave their today . . .

Reconciliation between nations in pursuit of freedom was among prayers during a particularly poignant Remembrance Day at Abbey Wood



cover image

The first of the RAF's A400M transport aircraft – to be called Atlas by the service – has arrived in the UK amid a fanfare at RAF Brize Norton, which will be its new home. The aircraft offers the service a huge uplift in tactical and strategic capability

desider

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NEWS

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CDM Commendation winner 2014

desider magazine's performance in the commercial market earned it an award from Bernard Gray, Chief of Defence Materiel, in his recognition of topperforming staff at DE&S over the previous 12 months. Advertising revenue from the magazine and its family of supplements and wallcharts reached more than £500.000 in 2013-14.

Bernard Gray

Chief of Defence Materiel

'The future of DE&S has taken another turn for the better'



As we reach the end of what has been a challenging, but ultimately very successful 12 months, DE&S is in the midst of welcoming a number of important new arrivals. On 17th November we awarded contracts for the first of our Managed Service Providers (MSPs), specifically those relating to Project Delivery and Human Resources. Contract signature was - for all of us in DE&S - a significant step forward in our journey towards becoming a world class procurement and support organisation.

We have all worked exceptionally hard and have achieved a great deal since our launch as a Bespoke Trading Entity last April, both in terms of project delivery and on the central transformation programme. But contract signature, and the arrival of the MSPs into the business, marks the beginning of something new for us as we head into 2015. We have been trusted to place these important contracts and now we must make them work for us. We have an unprecedented opportunity to harness the skills and experience of three top class private sector organisations. That alone represents a giant leap forward towards achieving our goals for the future of DE&S.

Many of you have rightly been following this issue closely, and will know that Work Package 1, which covers Project Delivery, has been divided into four lots covering Project Delivery in each of our domains. Contracts have been awarded to CH2M Hill for the Land and Joint Enablers domains, and Bechtel for the Air and Fleet domains. The Human Resources MSP, known as Work Package 3, is a single lot and the contract has been offered to PwC.

These contracts in no way absolve DE&S of its responsibilities for delivering the programme. We in DE&S remain accountable for our decisions and our output. The MSPs are here to assist and advise us on how we can get better

at delivering that output. They will not be running the business for us; that remains our task and we must continue our pursuit of delivering value for money and the best possible support to the Armed Forces.

What the MSPs will do is provide tailored and highly specialised private sector skills to support us where we need it most. They are being brought in to complement our existing in-house expertise and experience – of which there is a great deal – to help us build our own skills for the future. They will be working alongside us in pursuit of shared goals and objectives and it is vital that we acknowledge and respond to this fact, because neither party can succeed in isolation.

In some areas of DE&S the MSP staff will be highly visible, in other areas there will probably be very few of them, if any. We expect around 200 MSP staff at the peak of the programme, but this is flexible according to our business needs. Please make them very welcome - both across DE&S, and in the Commands and industry. They work for companies who put in the strongest bids and have the best skills necessary to deliver our requirements. They - like you - are absolutely key to our successful transformation. They will help us to improve support to the front line customers and deliver better value for taxpayers. They will help us to ensure that DE&S is a better match for industry, is more effective, more efficient and a better place to work.

As we head into 2015, I am committed to playing my part in building the capability of DE&S and to leading that work alongside the delivery of the Equipment Programme. But it needs to be a joint effort. The future of DE&S has taken another turn for the better.

With this positive news, I wish you and your families the happiest of Christmases and the very best for the New Year.

MSPs sign up to the latest stage of DE&S change

THE MATERIEL Strategy Programme achieved a major milestone on 17th November with the signing of contracts for the first Managed Service Providers.

The MSPs will provides killed personnel who have expertise and experience in supporting transformational change in organisations as large and complex as DE&S, and they will help transform DE&S into a higher performing and world class Programme Management organisation.

The Project Delivery MSP contract has been split into four lots, representing each of the DE&S domains. CH2M Hill will work alongside the Land and Joint Enabler domains and Bechtel will support the Maritime and Air domains. PwC has been awarded the single contract for Human Resources transformation.

Bernard Gray, Chief of Defence Materiel, said: "This important step puts DE&S firmly on the route to successful transformation, securing top class private sector support to the unprecedented programme of change upon which we are embarked.

"Getting us to this point is testament to the hard work and support of the entire DE&S business and it is up to us now to get the best out of the MSPs going forward, as we pursue our joint goals.

"I am confident that the knowledge and experience of the MSPs, coupled with our own in-house skills and expertise, will ensure that – together – we can deliver the transformation of DE&S, greater value for the taxpayer and outstanding support to the Armed Forces."

Contract award followed a summer of complex commercial negotiation by the Materiel Strategy team, focused on driving the right deal for DE&S and ensuring value for money for the taxpayer. The winning companies all have a strong background in driving through the sort of transformation that DE&S is currently undertaking.

On the HR side, PwC has extensive



Straddled by the giant Goliath crane, two major hull sections of Prince of Wales were joined together in Rosyth last month as the carrier programme passed another major milestone. Much of the forward parts of the ship are now in place. Work continues on Queen Elizabeth, in the background, left. Inset: an empty No 1 dock at Rosyth in September. ☐ Hull parts are joined together: page17 Prince of Wales learns lessons: pages 26 and 27

experience of transformational HR and culture change. In terms of project delivery, CH2M Hill had a significant role in delivering the 2012 London considerable Olympics and has experience in transforming project delivery programmes. Bechtel has decades of experience in complex project delivery and previous work on defence transformation programmes in the US.

Richard Smart, Director Materiel Strategy, said: "The MSPs we have chosen to work with are as committed as we are in their drive to ensure that DE&S becomes the best that it can be.

"I am very much looking forward to working alongside them, as they support all of us to deliver the transformation required over the next three years."

The MSPs will be working with DE&S in two key ways. First through the

DE&S takes on top class private support after a summer of complex commercial talks

Materiel Strategy team, which becomes a Rainbow Team comprising DE&S and MSP personnel. The MSP Rainbow Team Leads will be working closely with the heads of the DE&S domains and functions and their primary task is to provide a strategic overview of the transformation for DE&S as a whole. Secondly, MSP staff business, providing advice, challenge and subject matter expertise.

The competition for the last MSP, Work Package 2, which will be designed to improve DE&S Information and Financial Management as well as Information Technology, is expected to begin in the next few months.

will work alongside the rest of the DE&S



New Materiel Strategy Director Richard Smart

Moves around DE&S: page 41

'Together we can deliver the transformation of DE&S, greater value for the taxpayer and outstanding support to the Armed Forces' - CDM

World class teams support DE&S

BECHTEL, A worldwide project management, engineering and construction company, will be supporting DE&S' Maritime and Air domains.

Since its foundation in 1898, the company has worked on more than 22,000 projects in 140 countries on all seven continents.

Bechtel has been in the UK for more than 60 years, successfully delivering some of the most significant infrastructure projects in the country such as High Speed 1 and the Channel Tunnel (in 1990 Bechtel's experts were given full responsibility to get the project back on track) and is currently supporting delivery of Crossrail.

Of the Maritime and Air domain contracts, Bechtel has successfully undertaken similar defence transformation projects overseas. In the USA a Bechtel subsidiary operates two laboratories (the Los Alamos and Lawrence Livermore national laboratories) and an engineering organisation dedicated to research, development, design, training, and acquisition management for the US Navy nuclear propulsion programmes.

An international team of Bechtel leaders will work on the DE&S programme consisting of predominately British citizens in the UK and those who have gathered experience overseas.

"Bechtel will deploy a world class team of professional project management and supply chain leaders to support the continued transformation of DE&S," said John Williams, managing director of Bechtel's UK government services company.

"We are honoured to be part of the community that serves the men and women of our Armed Forces. There can be few more important responsibilities than helping to ensure those who risk their lives for our security get the equipment they need on time and on budget."



'Assisting DE&S in its match fit objectives' PWC, AWARDED the single contract for human resources transformation, is the largest UK and global professional services firm with extensive experience of transformational HR and cultural change.

More than 3,600 HR and change professionals are based in the UK, with experience of working across both Government and the private sector in a range of industries and sectors.

The PwC global network of firms operates in 157 countries, with 184,000 people. The geographic reach of the PwC network and the depth and breadth of services gives the comapny great strength in the professional services marketplace.

PwC will work with DE&S to establish a business

Q

Your questions answered on how MSPs will work



How much are the contracts

The Project Delivery contract – Work Package 1 – is expected to have a value of around £215 million (VAT inc) over the course of the initial term of three-and-a-half years. The Human Resources contract – Work Package 3 – is expected to have a value of around £43 million (VAT inc) over the initial term of three years.

Where is the funding for the MSPs coming from?

The procurement is being funded from the current DE&S Operating Budget.

Aren't the MSPs expensive?

The investment in MSPs will enable significant benefits for the MOD, Front Line Commands and DE&S; particularly with ensuring the delivery of our complex programme outputs to time, performance and cost. Against a £14 billion annual equipment programme DE&S is

confident these benefits will far outweigh the near term investment.

What authority and influence will MSPs have over decision-making?

The MSPs will be working alongside DE&S, providing strategic support and assistance in targeted areas. DE&S has awarded contracts to companies with particular expertise and success in what they do. They will be expected to influence heavily the future of DE&S. The DE&S Executive will remain very much in charge and final decisions on how DE&S transforms and how the MSPs support that will remain firmly with CDM and the DE&S leadership.

Will they be replacing existing Private Sector Support suppliers?

They may undertake some work that would otherwise have been undertaken by other Private Sector Support providers, particularly transformational or improvement activities, but not all. Who undertakes such work will continue to be assessed against value for money and normal commercial rules.

How will they work with DE&S suppliers and what does this mean commercially?

The MSPs will have a wide range of roles with some working at a strategic level and others with project teams to provide specialist knowledge. As with all contractors, the MSPs' purpose is to support DE&S which may require them to work closely with defence suppliers. It is also likely that some MSPs will attend supplier meetings alongside DE&S staff where required. Strict confidentiality provisions are in place to ensure that MSPs manage both DE&S and supplier information in accordance with DE&S guidelines.

How will the MSPs work with the business?

Firstly, through the Materiel Strategy team, which becomes a 'Rainbow' Team comprising a mix of CH2M HILL is the company to work alongside the Land and Joint Enabler domains.

Employee-owned CH2M Hill is one of the world's leading consulting, design, design-build, operations, and programme management companies serving government, civil and industrial clients, employing more than 25,000 people worldwide.

Its work is concentrated in the areas of water, transportation, environmental services, energy, defence, facilities and resources.

CH2M Hill's European headquarters is in London and employs 3,400 in the UK with an extensive graduate, apprentice and intern programme. The company is working on some of the UK's largest infrastructure programmes including High Speed 2, Thames Tideway Tunnels, Crossrail, the decommissioning of a former reactor in Dounreay, as well as being the Support Partner to the Submarine Operating Centre at DE&S.

 ${\rm CH2M\,Hill}$ was one of the leading partners in CLM, the Delivery Partner to the delivery authority for the London 2012 Olympic and Paralympic Games.

Internationally CH2M Hill is also involved in the Panama Canal expansion project and is managing delivery of the 2022 World Cup in Oatar.

Jon Baker, Managing Director of the company's International Nuclear Services for Europe, Middle East, North Africa and India, said: "Working on the MSP programme for Land and Joint Enablers is of critical importance to CH2M Hill as we look to build on our work on the Submarine Operating Centre, supporting the transformation of DE&S.

"We have over 3,000 employees in the UK and a significant team based in Bristol supporting a range of defence-related projects. As an employee-owned company, we are investing in paid internships, apprentices and have an extensive graduate programme helping to build the UK's future project deliver and engineering capabilities."

relevant Human Resources function and deliver business transformation.

To support DE&S the company has brought together a multi-disciplined team of Human Resources practitioners, business transformation and change specialists and programme management practitioners.

The company's HR Services Leader for Government and Public Sector, Ian Tomlinson-Roe, said: "We have been building relationships with the MOD over several years, which means we take on this engagement with a great amount of

confidence in the value we can deliver.

"Combining our government and private sector experience along with our workforce and human resource expertise, we can help deliver insight and experience in these critical areas to assist DE&S achieve its 'match fit' objectives."

In 2014, PwC was named Times
Top 100 Graduate Employer of the Year
for a record-breaking 11th consecutive
year, Graduate Employer of Choice in
Consulting and was an official supporter
of the Invictus Games.

DE&S personnel and representatives from each of the MSPs. The Rainbow Team will develop and manage implementation of strategic change as part of a Transformation Plan for DE&S as a whole. The MSPs will also contribute resource to and integrate their activities into the DE&S-led Programme Management Office whose role is to support the change programme and ensure optimum coherence of the strands of activity.

Secondly, they will work with the Chiefs of Materiel, the Operating Centre Directors and directly with the business to help DE&S improve delivery of its programme, either by providing advice and challenge, the provision of subject matter experts, or the ability to reach back to specialists within their own companies to obtain and spread the use of best commercial practice into DE&S.

There is more than one MSP - how will they work together?

The MSPs are incentivised to work together and some of their fee is dependent on DE&S assessment of how well they do this. In addition, some

of the key deliverables they will be working on are joint deliverables which means they have to work together to achieve them. Part of their fee is tied to achieving these key deliverables (the key milestones).

Who do the MSPs report to?

Director General Resources will act as the single point of accountability for all the MSPs at Executive Board level.
Overall day-to-day management and co-ordination of the efforts of all MSPs in relation to the central transformation effort will fall to Director Materiel Strategy, with the MSPs working in the domains reporting to their Chief of Materiel on domain-related issues, and the MSP supporting HR working to Director HR on HR-related work.

How many people will the MSPs bring into DE&S?

The exact numbers of MSP staff in the business will vary but the Project Delivery MSP is expected to bring in around 150 personnel to ensure the delivery of their objectives under the contract. The Human Resources MSP is likely to bring in around 70 personnel to achieve the objectives set out in this Work Package. DE&S will have the scope to adjust these numbers as the business requires.

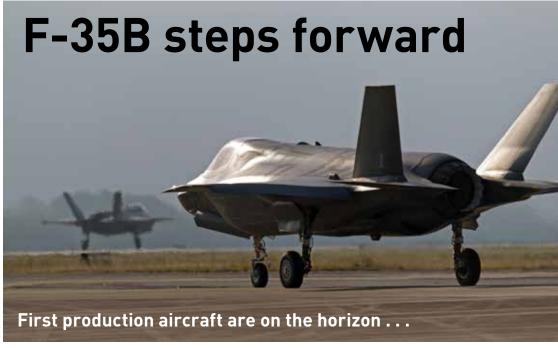
How will DE&S manage performance?

The MSPs will be governed by a number of Key Performance Indicators (KPI) relating directly to the DE&S Corporate Plan KPIs and associated target business performance. The KPIs used will be the same KPIs which the MOD uses to measure DE&S. In addition, they will be incentivised to meet specific milestones as agreed with the Executive Board for delivery of transformation.

Can DE&S staff be involved in developing and implementing new ways of working?

Absolutely! Involving staff from across the business provides the best opportunity to design a future that helps meet all needs.





Above: a UK F-35B Lightning II taxiing at Eglin Air Force Base, Florida

☐ The UK already has three F-35B jets based at Eglin Air Force Base in Florida. A fourth will be delivered in early 2016. These are for test and evaluation.

☐ The agreement is part of a larger contract award which will be let by the Joint Strike Fighter Program Office, based in Washington DC, with Lockheed Martin, and will procure 43 aircraft for the programme across six nations

☐ Significant UK sub-contractors to the programme include BAE Systems, Cobham, GE Aviation, Honeywell, Martin Baker, MBDA, QinetiQ, Rolls-Royce, Selex Galileo, Ultra Electronics and EDM.

BERNARD GRAY, Chief of Defence Materiel, has welcomed signing of the contract for the UK's first production batch of four F-35B Lightning II combat aircraft

"Signing the contract paves the way for the first batch of operational combat aircraft," he said of the 24th November announcement.

"By reaching this milestone, we remain on target for achieving both operational capability from land bases and the start of flying trials aboard the carrier *HMS Queen Elizabeth* in 2018 for this highly advanced multi-role stealth combat aircraft."

The contract for the F-35B aircraft, which will operate from the Navy's

carriers and RAF land bases, forms part of the MOD's investment over the next five years to procure an initial 14, as well as putting in place the necessary support arrangements and infrastructure. Further contracts will cover procurement of a range of equipment such as engines.

Minister for Defence Equipment, Support and Technology, Philip Dunne, said: "Not only does our investment afford us air superiority, but the UK's tier one status in the entire programme provides UK industry with a unique opportunity to produce world-leading products, technologies and manufacturing expertise for coming decades. The aircraft will be a powerful testament to the strength and capability of British industry."

The news comes as a UK test team has completed initial aircraft handling trials for ASRAAM and Paveway IV on the F-35B aircraft. Trial rounds, which are identical to the operational weapons, were tested for the first time during a series of flights from the US Navy's test facility at Patuxent River Naval Air Station in Maryland.

These initial tests help integrate weapons onto the F-35B, allowing test pilots to understand how they affect the way the aircraft performs and handles.

The aircraft are short take off and vertical landing and feature the latest stealth and intelligence surveillance, target acquisition and reconnaissance technology.

. . . and pilots and engineers are to get virtual training

A VIRTUAL training facility for the F-35B Lightning II has been opened at Lockheed Martin UK's Ampthill site in Bedfordshire.

The Virtual Analysis Laboratory (VAL) allows current and future pilots and engineers of the jet to get to grips with the aircraft's mission system and put the software through its paces.

By simulating highly classified battle scenarios, users are able to get a realistic understanding of how the F-35B will operate. The virtual cockpits, networked together to simulate multi-aircraft operations allow military personnel and industry to test how the software responds to situations.

Lockheed Martin is then able to use the VAL output to tailor the aircraft's capabilities to meet specific requirements of how the UK will operate the aircraft.

Once fully operational next summer, the VAL will have

the highest level of security classification available to industry outside the USA.

Virtual testing and operational analysis in Ampthill will complement the flight training by Royal Navy and RAF crews on the UK's aircraft in Florida. Practical and synthetic training will ensure that the UK's aircraft will be ready to achieve initial operating capability in 2018.

Air Commodore David Waddington, Air Commodore Lightning II, who opened the facility, said: "The ability to develop and test mission software rapidly has given the UK an edge on our existing combat air platforms during recent operations.

"I hope the laboratory will become a real force multiplier for the Lightning II Force, providing the men and women who will employ the aircraft in combat the



Testing people and software: pilots and engineers will be using the Lightning II training facility at Ampthill, Bedfordshire

confidence they will have the very best capability tested in the most

realistic synthetic environment available."

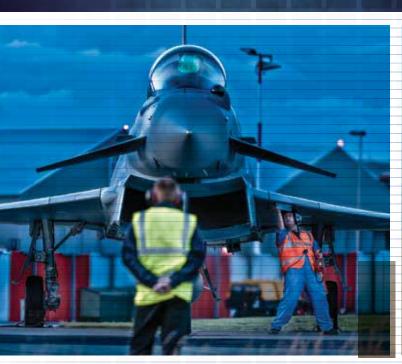
BAE SYSTEMS

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A modern Air Force moves as fast as the planes they fly. That's why they need a dynamic partner that can service, upgrade and innovate to ensure their fleet is at the peak of operational performance.

That's inspiration. That's BAE Systems.









NEWSREEL

Training technologies

A team led by XPI Simulation (a Thales company) has been awarded a £3.6 million contract from the **Defence Science** and Technology Laboratory to investigate future cost-effective methods to improve technology in training simulators for use by the Armed Forces.

Army advert

THE Army has launched a public information campaign to improve understanding of its role. The first phase is focused towards the Army Reserve while a second phase next month is focused on the whole Army. The campaign will feature TV, digital and press adverts.

Light saving

THE MOD's projects to replace existing lighting with LED lighting is expected to generate enduring savings of around £15 million per year, according to Minister for Defence Equipment, Support and Technology Philip Dunne. The Energy Spend-to-Save programme, developed after the 2010 Strategic Defence and Security Review, has seen £32.5 million spent at around 160 sites.

CDM awards

THE Chief of
Defence Materiel's
Commendations,
which recognise
outstanding
achievements in
defence equipment
procurement and
support, will again
be presented in Main
Building next year.
The ceremony will
take place on Friday
8th May.

DE&S on stand-by after

fast response

to equipment

gift call

GIFTING OF military equipment and training to Kurdish Peshmerga fighters battling militants in northern Iraq has now come to an end although DE&S remains on stand-by for further help if needed.

The arrangement with the Kurdish Regional Government as part of Operation Shader involved Soldier, Training and Special Programmes (STSP).

Colleagues from the Dismounted Close Combat team ensured requirements could be met while limiting the impact on the UK's own capabilities.

In August and September the UK gifted 40 Heavy Machine Guns as used in Afghanistan, and more than four Battalions' worth of Enhanced Combat Body Armour, helmets and eye protection.

In October, the UK gifted 200 Pyser binoculars – former Urgent Operational Requirements – and a dedicated spares package for the machine guns.

Defence Secretary Michael Fallon said: "ISIL militants are guilty of shocking brutality so I am pleased that we will supply weapons

to the Kurdish forces who are at the front line of combating their violent extremism."

Head of STSP, Brigadier James Daniel, added: "The swiftness of the MOD's response to the political demand for the gifting of military equipment is a direct reflection of the time and effort of the STSP supply chain managers.

"Their personal endeavours have directly contributed to the success of the Peshmerga in their fight against ISIL."



Above: Peshmerga fighters in Erbil, Iraq, receiving training on equipment gifted by the UK

Below: Brigadier James Daniel with Secretary of State for Defence Michael Fallon during a visit to Abbey Wood



Babcock named as preferred bidder for DSG sale

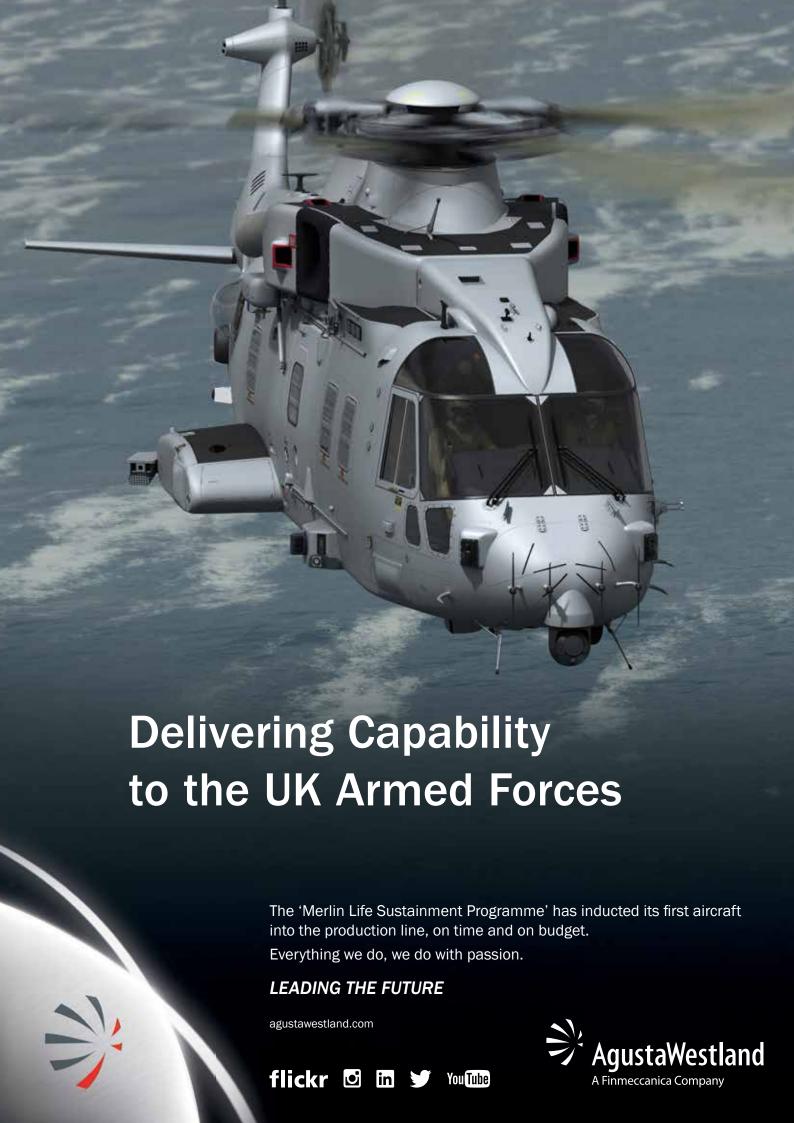
BABCOCK IS the MOD's preferred bidder for the Defence Support Group's (DSG) land business.

The 2010 Strategic Defence and Security Review White Paper announced the sale of DSG to reduce the MOD's running costs and focus resources on the front line. The sale also gives DSG access to the investment required to grow and transform services it provides to the Armed Forces.

A buyer will continue to provide the front line with DSG's capabilities to repair key military equipment, manage storage of the land vehicle fleet, and, if necessary, like DSG now, deploy personnel to support UK operations overseas. $\label{eq:constraints} % \begin{subarray}{ll} \end{subarray} % \begin{subarray}{ll} \end{subarra$

Minister for Defence Equipment, Support and Technology Philip Dunne said: "We remain on schedule to complete the sale of DSG by the end of March next year. I expect to be in a position to release further details of the winning proposition in the New Year once contract negotiations have concluded."

Selection of a preferred bidder is not confirmation of the new owner of DSG.



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Rosyth puts the skids under carrier No 2



PRINCE OF Wales - the second of the Queen Elizabeth aircraft carriers - is rapidly taking shape in Rosyth.

Two major sections, known as SB03 and SB02, were joined together in a day-long manouevre in No 1 dock, the dock specially adapted for the carrier hulls.

A specialist jacking and skidding system was evenly positioned across the length of SB03 made up of five lines of jacks, each capable of lifting 400 tonnes.

All jacks then joined together and worked simultaneously to ensure a stable lift of the block. around approximately 100mm off the ground.

Hvdraulic rams then worked to move the block forward 17 metres along the dock bottom.

The massive operation, which saw the blocks positioned well within the 10mm tolerance required for sign off, was completed inside a day and was a tremendous success.



A day in the life of an aircraft carrier: staff at Rosyth get ready to move the two major sections of Prince of Wales' hull together in a day-long operation. Forty per cent of the ship is now in No 1 Dock at Rosyth



Prince of Wales learns lessons from Queen Elizabeth: pages 26 and 27

Navy passes computerised inventory milestone

MORE THAN half of Royal Navy ships and submarines have now been included in the computerised system for demanding, supplying and recording military equipment.

This involves the submarine flotilla, destroyers, frigates and amphibious ships like HMS Ocean along with DE&S' Inventory Management Operating Centre.

Management of the Joint Deployed Inventory, or MJDI for short, is one of the largest change projects affecting people across defence.

More than 1,100 units already have

MJDI which has replaced a number of legacy systems and brings greater efficiency and better scrutiny to the process. The Royal Navy is the final service to receive MJDI.

Roll-out involves Boeing Defence UK staff at Bicester as well as uniformed teams from Boscombe Down. Roll-out began last February with half of the Navy fitted out by the end of October.

Each ship or submarine needs a server prepared by the Boeing team, overseen by Sue Willis at Bicester.

This is then handed over to the

technical team, headed by Major Spencer Mannings, which installs each server. Logistics staff then set up each account and check data has migrated from the legacy system.

Logistics staff then 'floor walk' to help onboard teams with any issues arising. The process has required flexibility as ships' programmes are subject to change at short notice.

Communication and co-operation has involved Boeing and Steria (software subcontractor), along with Atlas engineers and the roll-out teams at Boscombe Down.

NEWSREEL

Help to Buy is a success

MORE than £28 million has been loaned to 3.220 families under the Forces Help to Buy Scheme launched last April to help them purchase their first homes or move up the property ladder. Defence Secretary Michael Fallon said: "Helping our servicemen and women get on the housing ladder, so they can enjoy the security of owning their home, is a great example of the support we provide to them and their families in return for everything they do for our country.

New bidders

ASCENT Flight Training, DE&S partner for the **UK Military Flying** Training System, has chosen Affinity as preferred bidder in the aircraft service provider competition for the fixed wing programme. Bidders who replied to Ascent's Request for Proposals on the rotary wing element are Airbus Helicopters, Cobham and Elbit.

ISIL missions

RAF Reaper remotely piloted air systems have been in action 22 times between 22nd October and 9th November over Iraq supporting operations against ISIL. In two cases Reaper was armed and there was one weapon release.

Range boost

INTERNATIONAL funding will broaden capability of the Hebrides range in Scotland, Ministers have said. The range is managed by QinetiQ on behalf of DE&S.

UK signs up to give Typhoon greater vision



The Eurofighter countries sign up to the contract, from left: Dr Katrin Suder - State Secretary for Defence, Germany; Pedro Arguelles Salavveria – State Secretary for Defence, Spain; Alberto Gutierrez - Eurofiahter chief executive; Air Vice-Marshal Graham Farnell - NETMA General Manager; Philip Dunne. Minister for Defence Equipment, Support and Technology; Domenico Rossi - State Secretary for Defence, Italy

TYPHOON IS to take on even greater combat effectiveness following signing of an £800 million contract to develop a new electronic radar system.

The introduction of an Active Electronically Scanned Array (AESA) radar capability is designed to give the aircraft greater vision than its competitors through simultaneous multirole air-to-air and air-to-ground tracking of targets with increased fidelity and range.

The contract has been awarded to Eurofighter Jagdflugzeug GmbH by NETMA – the Nato Eurofighter and Tornado Management Agency – on behalf of the UK, Germany, Spain and Italy.

It is another major milestone in the development of the programme.

The radar contract sits alongside recent announcements for weapon capability upgrades and shows how the partner countries are committed to maintaining the aircraft's status as a world class multi-role combat aircraft.

As well as sustaining UK jobs, the contract also represents a significant step in delivering advanced radar technology required by the RAF.

Meeting with his European counterparts in Edinburgh, Minister for Defence Equipment, Support and Technology Philip Dunne said: "The development of this AESA radar is a significant

step in delivering technology that will ensure the RAF is equipped to meet the evolving demands of operations.

"The contract also represents another significant investment in the defence industry in Scotland, sustaining around 500 jobs at Selex ES in Edinburgh."

The contract marks culmination of investment by the partner nations and industry in developing the technology required to provide Eurofighter Typhoon with cutting edge sensor capability.

The Eurofighter consortium, along with its primary supplier, Euroradar, and a range of other suppliers across Europe, will all contribute to the integration programme.

Subs move to Clyde ANOTHER STEP towards Clyde becoming the Royal Navy's submarine centre of specialisation has been taken with the move of two *Trafalgar* class submarines from Devonport.

By 2020, HMS Talent and HMS Triumph will be at their new base, and Clyde will be home to all of the UK's submarines.

The Royal Navy's other two *Trafalgar* boats, *HMS Torbay* and *HMS Trenchant*,

are to remain in Devonport until they are decommissioned in 2017 and 2019 respectively.

Devonport will remain the submarine centre of deep maintenance.

Clyde has already begun construction to support the requirement of the ships, submarines and Royal Marines that will be based there. The investment runs into hundreds of millions of pounds.

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Crown Commercial Services (CCS), as the Contracting Authority, in collaboration with Pro5 and the Ministry of Defence, have now established a contracting route to meet the demands of Government for Information Assurances products and services.

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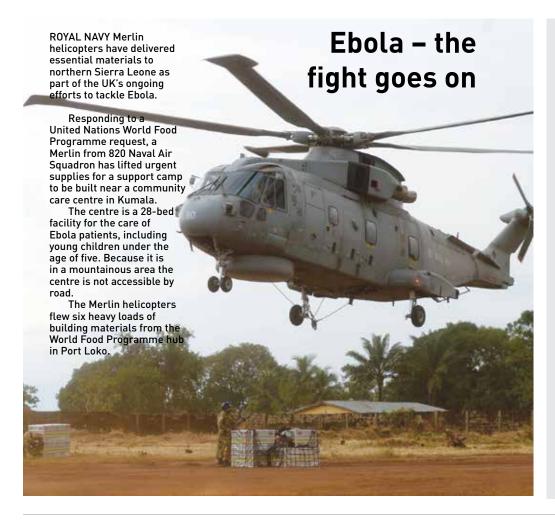
Network & Infrastructure

audio-visual solutions and secure destruction and disposal services. The main proviso for the product and solutions is to provide Information Assurance enforcing and/or relevant functionality.

The Technology Products Framework encompasses RM721 - Commoditised IT Hardware and Software (CITHS); RM1692 - IT Hardware and Solutions (ITHS) and the Information Assurance framework managed by the communication technology element of the MoD, Information Systems and Services (formerly part of Defence Equipment & Support).

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UK watchdog praises DE&S

THE GOVERNMENT'S spending watchdog has confirmed its first unqualified opinion in five years on DE&S' inventory and capital spares balances.

As reported in desider in August, removal of the inventory qualification by the National Audit Office enhances DE&S' reputation for good management.

Sir Amyas Morse, head of the NAO, said: "The MOD has made significant improvements in its management of and accounting for assets held on its inventory systems.

"Consequently, this is the first time since the end of March 2008 that the department has had an unqualified audit opinion on its inventory and capital spares holdings."

DE&S has had an audit qualification for each of the last five years covering a range of inventory issues.



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DE&S contract underpins new Portsmouth investment

A MAJOR milestone in modernising Portsmouth naval base has been met with the opening of the refurbished 15 Dock Centre of Specialisation, the first of four new centres in the base for future support to Royal Navy ships for global operations.

DE&S signed the £3.2 billion Maritime Support Delivery Framework this autumn to maintain and repair the Royal Navy's warships and to underpin further dockyard investment.

The new facility will be used for the upkeep and maintenance of Type 45 destroyers and Type 23 frigates and marks the start of a 15-year transformation to modernise the base, including preparations for the Queen Elizabeth aircraft carriers.

The new 15 Dock Centre of Specialisation will provide improved accommodation and amenities for Royal Navy and BAE Systems staff and an upgraded

Rear Admiral Ian Jess, Assistant Chief of Naval Staff (Support), said: "Across all three of our naval bases we are investing in facilities to support a modern Navy deployed on operations throughout the world.

"I am delighted to open the new 15 Dock complex in Portsmouth today which further demonstrates the increased investment we are providing to our naval bases and commitment to their future.

There will be three other centres developed on the base which will be for the carriers, Fleet Time Engineering for Type 45 destroyers and Type 23 frigates and an improved mine countermeasures complex.

Teams join up to ensure vital armour is fitted

THE FIRST of the Royal Marines' MAN Support Vehicles has been returned to users after being fitted with ballistic and blast armour.

The contract between DE&S and MAN Truck and Bus UK covers 91 of the Lead Commando Group's vehicles.

Almost 400 had already been fitted with armour, for which they had been designed, as well as other Theatre Entry Standard equipment for their successful deployment to Operations Telic and Herrick.

These fits had been managed by DE&S' Operational Support Vehicle Programme and, for the latter operation, carried out by MAN in the UK and Defence Support Group staff at Camp Bastion.

Although these vehicles have now been returned to the UK and Germany, additional MAN SV require armour to be fitted for the return to contingent operations.

The Operational Support Vehicle Programme Operational Infrastructure Programme are both part of the Operational Support Programmes team at Abbey Wood, responsible for logistics unique vehicles and battlefield infrastructure, special tools, utilities and support infrastructure respectively.

The teams co-operated in providing a facility to apply armour to logistics vehicles. Operational Infrastructure Programme has a contract with KBR for storage and



Blast armour makes the Support Vehicle safer: fitting the armour is a skilled and intensive process requiring around 67 hours' work per vehicle. Although Front Line Command staff can do this, using specialists enables them to concentrate on force generation for Operation Cougar to the Mediterrean and Middle East and the large equipment support burden that is incurred between exercises. To further reduce the burden on the Royal Marines, MAN also collect and deliver vehicles from the wide range of establishments at which they are based.

maintenance of the Joint Operational Fuel System.

With MOD agreement, unused space in this facility can be contracted under a gainshare arrangement.

This offered value for money and the site had the necessary infrastructure and MOD IT systems in place.

MAN sent a team to the Royal Marine Commando Logistic Regiment at Chivenor to assist the unit with an initial batch of armour fits.

This ensured that MAN could refresh and expand their trained team before moving on to the main batch of trucks, and also allowed the Regiment to gain practical experience of fitting armour to their own vehicles.

Simon Frame, Logistics Vehicle Project Manager at DE&S, said: "Using the site that the Operational Infrastructure Programme already under contract offered a great opportunity to maximise value for money, while ensuring that MAN had access to all the facilities that they needed to conduct this vital task."

NEWSREEL

Apprentices on the rise

RECRUITMENT of engineering and science apprentices and graduate trainees in DE&S has more than doubled over the last five years, reflecting the organisation's commitment to developing and investing in skills. Latest Parliamentary figures published show around 60 apprentices were recruited in 2010. which has risen to 90 alongside 50 graduate trainees up to the end of October this year with more to come.

QE power

HMS Queen Elizabeth is expected to proceed to sea under her own power for the first time in early 2017, on current plans, and HMS Prince of Wales in 2019, Defence spokesman Lord Astor has confirmed to the House of Lords.

☐ Carriers: pages 26 and 27

Sub comms

SEA has been selected by prime contractor BAE Systems to deliver advanced external communications technology for the UK submarine fleet. The value of the initial contract is around £23 million up to detailed design and long lead procurement.

Legal review

THE Government repeated in Parliament last month its obligation under Article 36 of the 1949 Geneva Conventions (see desider November) to put all weapon systems and upgrades through robust legal review.

NEWSREEL

Software support

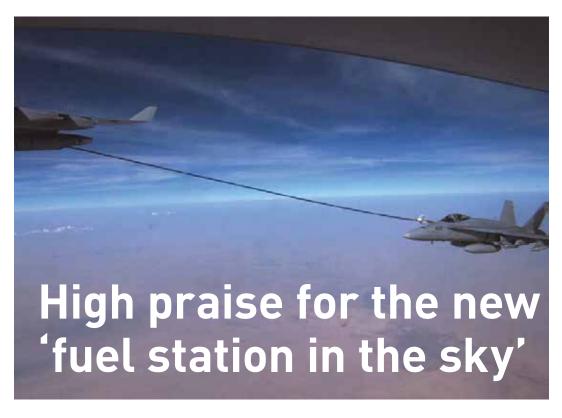
QINETIQ has been awarded an 18-month contract to continue supporting the Royal Navy's Software Issuing Office (SIO) in the distribution of all software and electronic data to its fleet units across the globe. The SIO is part of Navy Command's Fleet Information Management Unit which provides mission and system critical geographic, encyclopaedic warfare reference data and electronic publications for command, control, combat and mission support systems across all fighting arms of the Royal Navy.

Mast work

ONE of the most prominent landmarks in Devonport - the 32-metre main flag mast on the ceremonial Quarterdeck of HMS Drake - has been given a highlevel makeover. Strategic partner Interserve Defence commissioned Survitec Services to remove and replace all the mast rigging and fixings and arrange remake of new upper and lower yards. Fabrication of the yards was sub-contracted to Mashfords Boatbuilders, at Cremyll in Cornwall.

GR4 extends

T0 maintain flexibility in a changing world, the RAF's Tornado GR4 force will maintain three, rather than two, front line squadrons at RAF Marham for another year beyond next March. This will help the transition from Tornado to Typhoon. The out-of-service date for the GR4 fleet remains 2019.



MORE THAN two million litres of fuel have been offloaded by the RAF's Voyager to aircraft involved in military intervention against militants of the so-called Islamic State in northern Iraq.

This achievement has prompted praise for DE&S' teamwork from the leader of the Strategic Transport and Air-to-Air Refuelling team Chris Dell.

Voyager has been refuelling RAF Tornados, and C-130s plus US Navy F-18 Super Hornets and EA-18G Growlers and US Marine Corps AV-8B Harrier II aircraft. French Armée de l'Air Rafale fighters have also taken on fuel from the UK transport aircraft.

"None of this would have been possible without the effort and skill of each and every member of the STAAR team working with our colleagues in the RAF and AirTanker that has seen successful delivery of the aircraft and swift production of the required clearances," said Mr Dell.

"Continued support has enabled delivery of the Voyager service generally including the Voyager aircraft in theatre.

"The Chief of the Air

Staff has been in theatre and expressed his satisfaction with the capability delivered by Voyager and his thanks for all those involved in making it happen; that includes every member of the STAAR team."

Operation Shader is the

name given to the military intervention which began in August as a humanitarian mission and has continued with deployment of a number of air forces' aircraft in the aerial reconnaissance and strike roles.



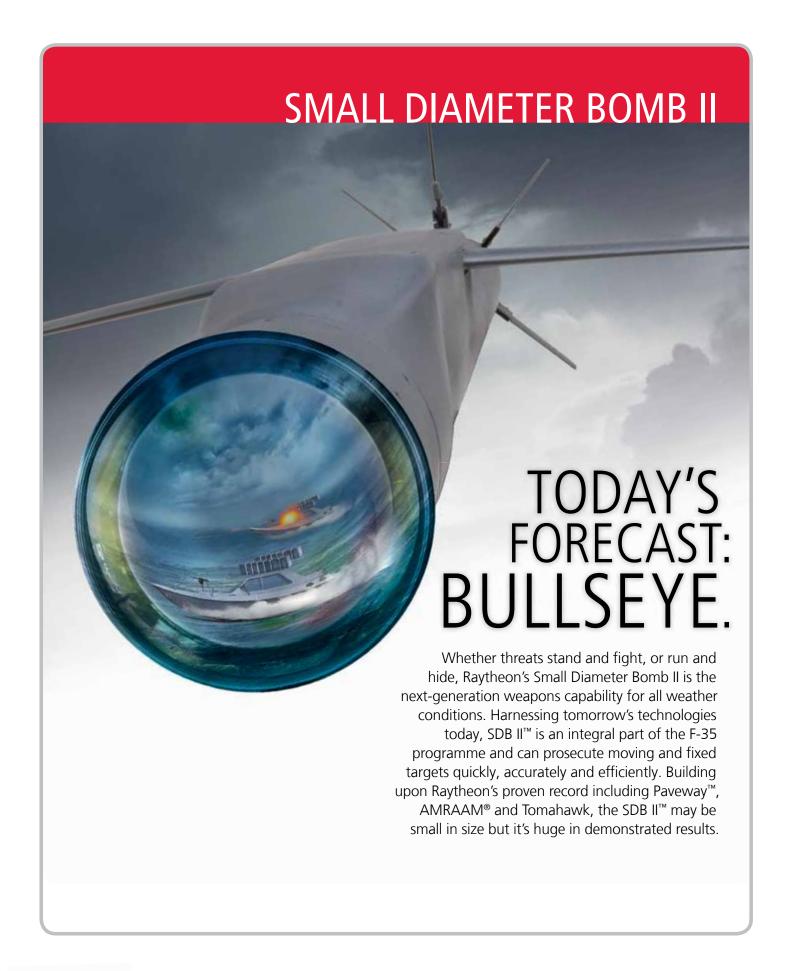
☐ Voyager was in the public eye last month during the final drawdown from Camp Bastion. The last man out, Wg Cdr Matt Radnall of the RAF Regiment, arrived at RAF Brize Norton bringing home the camp's Union flag.

His troops manned watchtowers on the camp perimeter until the last possible moment, handing over each tower to Afghan security forces in a seamless transition, before boarding an RAF Chinook to Kandahar, from where they were flown home.

Tattoo tickets go on sale EARLY BIRD tickets for the 17th-19th July Royal International Air Tattoo at RAF Fairford have gone on sale.

Tickets, priced at £26 for the Friday and £36 for Saturday and

Sunday, are available until 31st January. Next summer's show will focus on aircraft whose primary role is to protect their nations' skies. Visit airtattoo.com for details.







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Bloodhound up to speed

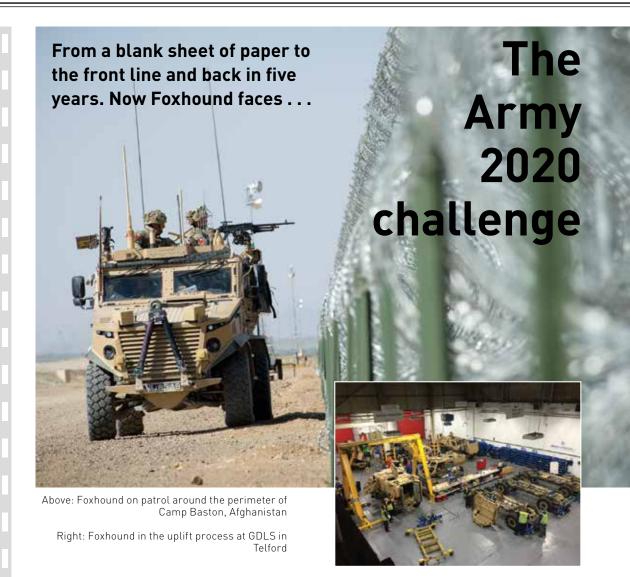
THE Bloodhound Project has started the 12-month countdown to its first land speed record attempt with a high-speed communications test at Hakskeen Pan, South Africa. An L39 jet aircraft flew multiple passes down Bloodhound's specially prepared desert track. synchronised with a Jaguar F-Type Coupé driven by project director Richard Noble, and a Jaguar XF saloon at closing speeds of up to 500mph, half the speed of Bloodhound. The project has been backed by MOD engineers and will host test runs and record attempts in 2015 and 2016.

2020 on track

ARMY 2020, delivering a flexible and adaptable force the nation needs to defeat future threats, is on track, Defence Secretary Michael Fallon has said. "The Army is in the middle of the busiest period of change in the programme which will see the majority of units complete their reorganisation next year," he told a 24th November defence debate. Despite this ambitious change the Army remains fully deployable to support current operations, including those in west Africa."

Iraq sorties

FROM 1st January this year to 10th November the total number of RAF missions flown in Iraq by all UK military aircraft is 251, according to the latest figures released in Parliament.



PRODUCTION OF the Foxhound patrol vehicle is drawing to an end only five years after its requirement was developed – and now it is facing a new challenge.

In that time a brand new vehicle emerged from a clean sheet of pager, 400 were built, 60,000kms of reliability trials were held, two and a half years' of operational service were completed, and a final mission reliability of more than 90 per cent was achieved.

"And all this in a timeframe that might normally see a new requirement reach the manufacturing stage," said Jason Purveur, Assistant Head of DE&S' Protected Mobility Vehicle Programmes. As Army 2020 takes shape the first 376 Foxhounds will return to General Dynamics Land Systems Force Protection Europe (GDLS:FPE) to be upgraded to the final build standard.

This will introduce improvements developed in the reliability demonstration trials which have been embedded in the build of the final batch – tranche 3 – of 24 Foxhounds.

Trials tested reliability and growth at the same time, enabling them to be completed inside 12 months.

Mr Purveur said: "It has been hugely rewarding being involved in the delivery of Foxhound which provides leading edge survivability for a vehicle its weight and size.

"I am hugely proud of what the Foxhound team have achieved and I'm certain the vehicle will reliably deliver much needed capability to the Army."

GDLS:FPE aims to complete the uplift programme within 18 months. Barry O'Kane, of programmes, head its "Foxhound has set a said: new benchmark for Urgent Requirement Operational programme delivery reliability performance. This has been achieved by ensuring an open and collaborative approach between industry and all stakeholders within the MOD."

Ex-Army chief praises Abbey Wood A FORMER head of the British Army has praised the work of DE&S in supporting UK Forces' operational work in Iraq and Afghanistan.

General Sir Mike Jackson was Chief of the General Staff from 2003-2006, taking up his post just a month before the invasion of Iraq.

He has since retired and works as a consultant but in a recent BBC television interview he was keen to salute the work

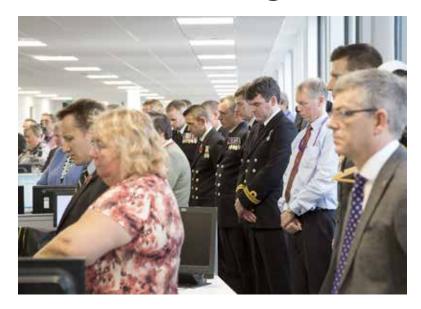
of west country people for contributing to successes in Afghanistan.

"Abbey Wood did move quickly to fill the gaps which were clearly there from our first major deployment," he said.

"The rule of law can prevail (in Afghanistan), where education can be for all, where institutions can build. And we have gone a long way down that road."

He said it was a legacy the west country could be proud of.

Lest we forget



DE&S staff paid their respects to the fallen on the 100th anniversary of the start of World War One - while giving generously in another successful poppy appeal

ACROSS DE&S, staff paused on 11th November for the annual two-minutes' silence to remember the dead of conflicts

Members of the Helicopters operating centre and industry colleagues, pictured above, in Centenary House, Yeovil, took time to remember the men and women of the Armed Services who have died in conflict since World War One.

Commodore Andy Lison, Head of Helicopters 1, led the remembrance, joined by a service chaplain from RNAS Yeovilton, Rev Janice Honey Morgan, and bugler Alan Griffiths.

The joint MOD-industry facility, opened this year, was formally named Centenary House to recognise significance of 2014 as a special remembrance year.

At the same time Sea King team leader, Capt Kieran O'Brien, and a contingent of serving DE&S military personnel, joined the local community at Yeovil war memorial. Capt O'Brien laid a wreath on behalf of the Helicopters OC and DE&S.

A happy poppy day: page 39

Poignant at Abbey Wood: pages 30 and 31



ABBEY WOOD staff travelled far and wide across Bristol to make sure the second annual city-wide poppy appeal turned in another bumper cash amount for the Royal British Legion.

From the airport and bus station to railway stations and shopping centres it was Abbey Wood helping to lead the way to a final total of around £42,000.

And more than £7,000 was raised in DE&S headquarters from a range of sponsored events in neighbourhood two which saw hundreds of staff digging deep to boost the appeal

Wg Cdr Steve Chappell, above left, and Master Aircrew Jim Stewart are pictured at Airbus in Bristol, supporting appeal organiser Kate Rodriguez to collect donations from employees for the annual appeal.

NEWSREEL

System in roll-out delay

ISSUES during flight trials on two Tornado aircraft this year will need resolution before the Traffic Alert and Collision Avoidance System II can be rolled-out across the fleet, Minister for Defence Equipment, Support and Technology Philip Dunne has told Parliament. "It is not possible to give an indication of revised timescales until the scope of the additional work has been properly assessed," he said.

Still on course

DESIGN, engineering and project management consultancy Atkins has had its contract renewed to deliver ship safety management training for the MOD on behalf of the Defence Maritime Regulator. The oneyear contract sees Atkins deliver six week-long courses providing awareness of the principles and practices within ship safety management.

UK T26 boost

THE Government has repeated its commitment to the future of shipbuilding on the River Clyde while being pressed on construction of the Type 26 Global Combat Ship. "Complex warships for the Royal Navy are only built in UK shipyards," said Defence Minister Philip Dunne. "While the build contract for T26 has not yet been awarded, from 2015 the only shipyards in the UK that are able to build complex warships will be those on the Clyde."

Touchdown

The RAF has welcomed the arrival of its first A400M. Emma Hallett saw its unveiling at RAF Brize Norton.

massive sense of excitement has overcame those working at RAF Brize Norton last month as the first of the UK's next-generation military transport aircraft was delivered to the base by the DE&S A400M project team.

The aircraft's much anticipated arrival was officially marked by the MOD in a ceremony attended by Chief of Defence Materiel, Bernard Gray, Defence Minister Philip Dunne, Airbus UK President Paul Khan and other industry representatives.

The aircraft, which will replace the

existing fleet of C-130 Hercules, took pride of place in a hangar, flanked by a C-17 and Voyager. It was later toured by the Prime Minister who said it will be "a huge contributor to future air mobility in the RAF".

The aircraft is the first of 22 A400M Atlas to be delivered in a £2.8 billion programme which has secured thousands of British jobs.

Welcoming Atlas to its new home, Mr Gray described it as a "world class aircraft" that was "at the leading edge of aerospace". He also thanked the DE&S project team for their work on the "hugely complex" and "truly multi-national programme".

"Standing here next to the RAF's first A400M Atlas is a very proud moment for us all," Mr Gray said.

"Reaching this key milestone in one of our DE&S flagship projects is another great achievement for our team, Airbus and for the rest of our partners."

The aircraft, manufactured by Airbus Defence and Space, represents major advances on its predecessor, capable of flying almost twice as fast, twice as far and carrying almost twice as much cargo.

Air Commodore Stephen Wilcock, head of the A400M Programme, said: "To see A400M arrive at RAF Brize Norton is a hugely significant point in the programme and having it here in the hangar, next to Voyager and C-17, makes me hugely proud.

"We have worked hard to deliver this first aircraft to put in place the support



arrangements and to certify the aircraft for the RAF to be able to operate from day one. I am very pleased with what we have achieved by working together with our industry partners, Airbus and Rolls-Royce. Many of the A400M project team have been on the programme for many years, so this is a huge day for them."

Since arriving at the airbase on 17th November, the A400M Atlas has completed its maiden flight with the RAF, during which its pilots said it "handled like a dream".

The aircraft is now being used to support ground based training for the variety of personnel who will fly, handle, maintain and support the aircraft, with one pilot adding "everybody now wants to play with the shiny new toy".

Station Commander Simon Edwards said: "RAF Brize Norton is already a busy and exciting place, having A400M Atlas arrive, just makes it more exciting.

"The station has now got an incredible

air mobility fleet – C17, Voyager, and C-130J of course – but with A400M as the new kid on the block, the most exciting, the most promising aircraft we have got here, everybody wants a piece of Atlas right now.

"We absolutely recognise that we have been delivered this important capability and the huge team behind getting it to us and we now need to grab it, make it sing and deliver the promise of this amazing aircraft and what it offers."

With future forces likely to be reliant on heavy protected mobility vehicles and humanitarian operations looking to deliver relief quickly to more remote or desolate regions, the A400M Atlas requirement was 'to deliver what you can't get into a Hercules into landing zones that a C-17 can't get into'.

Executive Vice President Military Aircraft, Domingo Ureña Raso, said: "It is an enormous pleasure to see the A400M entering service with the RAF which is one of the leading exponents of military air mobility worldwide.

"Airbus Defence and Space is today privileged to be the biggest provider of large aircraft to the RAF and we are absolutely committed to executing that responsibility to the very best of our abilities for many years to come."

While the A400M Atlas was assembled in Seville, Spain, the programme has brought 8,000 jobs to the UK, with the supply chain including around 30 different companies, a point highlighted by Mr Dunne as he addressed VIPs at Brize Norton.

Later in the day, the Prime Minister toured the aircraft and met the air crew. He said: "The arrival of the A400M Atlas will be a huge contributor to future air mobility in the RAF and is a further example of this Government's continued investment in the equipment our Armed Forces need."



There's a new Marshall in town

High praise for the DE&S team which has signed a £1.5 billion contract to update the UK's military air traffic management. Emma Hallett reports

E&S' Marshall project team took a 'sprint across the line on what had been a marathon programme' with the signature of a £1.5 billion contract to update and sustain the UK's military air traffic management capabilities.

The contract, which was awarded a year early, is expected to save the taxpayer up to £1 billion over the 22-year term of the contract, when compared with the 70 contracts it will replace.

Starting next year, it will ensure an efficient, sustainable and modern Air Traffic Management (ATM) service for the UK Armed Forces at more than 60 airfields and ranges in the UK and overseas, including in Cyprus, Gibraltar, Falkland Islands and Ascension Island.

The contract was awarded to Aquila,

a joint venture between Thales and air traffic services company NATS, and announced at a media briefing in London at the end of October.

The announcement was led by Aquila and attended by Minister for Defence Equipment, Support and Technology, Philip Dunne who congratulated team members for their efforts in securing the contract on the 'marathon programme'.

"We should thank our colleagues at DE&S for their job in protecting the taxpayers' interest and getting the best value out of this contract," he said.

"We are delighted to be providing greater efficiency through this procurement to the Armed Services. It will generate approximately £1 billion of savings for the MOD, compared to the current plethora of contracts and is yet another example of a military procurement through DE&S bringing

Following the announcement, Clive Tarver, DE&S Director ISTAR said: "The Marshall team and I have been supported superbly by stakeholders from across DE&S and the department - by the Senor Responsible Officer and Front Line Commands for their flexibility and responsiveness; by the Cost Assurance and Analysis Service approvals team for timely cost modelling and evaluation; by Defence Planning Assumptions for expediting the scrutiny and approval process, particularly with the Treasury; and by senior support from the Chief of Defence Materiel, Chief of Materiel (Joint Enablers), the Business Case Review Board, Investment Appraisal Committee and the Minister. This was a big team effort."

The MOD has been working on Marshall, and its predecessor the Joint for the last decade. Shortly before the contract announcement the team was also congratulated by Bernard Gray,



Mick Brown, Marshall team leader, said: "Accelerating contract award by 12 months did not come without a massive effort by the entire Marshall team and it was great that CDM was able to recognise this achievement in person".

"The visit from CDM sent a very positive message and demonstrates a clear understanding from the very top of the organisation of the challenges involved in delivering a complex project such as Marshall."

The contract was awarded using the Competitive Dialogue procedure with Aquila beating off rival bids from the Lockheed Martin UK-led consortium named Fusion and from BAE Systems.

Mr Tarver said Aquila was chosen because it offered the best value for money and the best technical solution.

"The team and I are delighted to get to contract signature after they have worked so hard on the Competitive Dialogue process, including accelerating it to deconflict with the General Election," Mr Tarver said.

"I am proud of their effort and achievement, and we are very pleased to have a taut contract in place that will deliver an effective ATM service to the Armed Forces while delivering significant cost savings to the taxpayer."

Aguila will deliver safe and assured terminal ATM services to military and civilian air traffic control officers

The contract includes a £400 million investment in a wide range of sophisticated equipment such as advanced surveillance radars, navigation aids and radios.

The contract will introduce four ATM operational hubs in the UK – allowing services to be centralised, streamlining delivery and making better use of new technology.

Overseas airfields, Royal Naval Air Stations and the more geographically isolated UK airfields and ranges will continue to operate on a stand-alone basis, but with fully modernised approach and visual control rooms.

Maintenance services will be delivered through a regional support model of six UK regions, ensuring quick response times whenever an issue is identified.

While the contract has now been signed, the pace hasn't slowed for the team. They are now working closely with Aquila to ensure a smooth handover of responsibilities on the vesting day of 1st April next year.





Taking shape – the new Prince

Lessons learned on the building of *Queen Elizabeth* are being included in construction of the second aircraft carrier

s the focus falls on construction of the second of the 65,000-tonne aircraft carriers for the Royal Navy, the Aircraft Carrier Alliance – DE&S, BAE Systems, Thales UK and Babcock – is putting into practice the lessons from more than five years of construction.

Queen Elizabeth was floated out at Rosyth during the summer for work to begin on integrating her complex systems. Now major sections of *Prince of Wales* have arrived and are being assembled in Rosyth, with the Alliance partners keen to stress how much they have learned.

Angus Holt, Delivery Director for *Prince of Wales*, describes the first carrier as 'a true prototype' whose construction has informed all areas of the programme.

"Queen Elizabeth carriers pioneer the best of British design with innovations such as the first-ever twin island configuration and the introduction of highly mechanised systems below deck, which together provide the Royal Navy with a sea change in capability," he said.

"The carriers are the first UK warships to be designed from the start using Lloyds Naval Ship Rules for Systems and Structural Design, as well as Lloyds commercial rules for equipment procurement. As *Queen Elizabeth* was a true prototype, the building of the second ship is fundamentally more straightforward as each stage can be completed 'right first time', with lessons learned from *Queen Elizabeth* at each stage of the way.

"For example, Prince of Wales' assembly started on schedule in early September with approximately a quarter of the ship now in the dock. The centre blocks for the front half of the ship were in Rosyth by the end of September and the bow has now been lifted into place, just days after the large lower blocks were towed into position. This is significantly faster than experienced with Queen Elizabeth."

Changes in Rosyth have been matched by those in the shipyards around the country, responsible for building the ship's constituent parts.

"All the blocks and sponsons for *Prince* of Wales are arriving with far more work completed in the build yards than for the first ship," said Mr Holt. "There was more than ten per cent additional outfit work completed for Lower Block 03,



for example. This is following lessons that have been learned from *Queen Elizabeth* to ensure we maximised the level of outfit in the build yards, before transporting to Rosyth for assembly."

With the huge bulbous bow making *Prince of Wales* recognisable as the formidable warship she will eventually be, the performance of the Alliance has been good. "It's performing well," said Mr Holt. "The Alliance partners have a 'one team' philosophy with each placing the needs of the programme first. This unique partnering relationship allows each organisation to bring its own areas of expertise and flexibility, including, for example, ramping up resources, when and where required."

The programme has reinvigorated investment in early careers programmes in the sector, with Alliance partners recruiting more than 890 apprentices and 250 graduates since contract signature in 2009. Throughout the supply chain, it is estimated that a further 2-3,000 jobs have been created or sustained, helping to boost local economies across the UK. Work on the carriers has created or sustained between 7-8,000 highly skilled jobs across the Alliance partners and their shipyards in Glasgow, Rosyth, Portsmouth and Devon.

For DE&S, the move of *Queen Elizabeth* out of the dock at Rosyth, replacement by the first blocks of *Prince of Wales*, and the efficiency which has been built into the process by the success of the first carrier, is helping to build already solid morale.

"The degree to which lessons learned from *Queen Elizabeth* are being enthusiastically embraced is as heartening as it is essential," said Rear Admiral Henry Parker, DE&S Deputy Director Ships and Director Ship Acquisition.

"And the rate that *Prince of Wales* is being brought together in Rosyth is truly impressive. Not only this, but the Prime Minister's recent announcement that both ships of the class will be operated has given a real fillip to the joint team."





DE&S' French connection

Bernard Gray, Chief of Defence Materiel, has put pen to paper on future Anglo-French development of unmanned air combat.

Robin Clegg looks at the small print

Pictures: Andrew Linnett

set of defence co-operation contracts for the early phase of a joint development of Unmanned Combat Air Systems (UCAS) have been presented to industry partners by the UK and French governments.

Bernard Gray, Chief of Defence Materiel, and his French counterpart Laurent Collet-Billon, Head of the French Direction Générale de l'Armament (DGA), awarded the contracts worth £120 million in total at a ceremony in Paris.

The two-year Future Combat Air System (FCAS) Feasibility Phase programme will involve six industry partners, three from each nation, and explore concepts and options for the potential collaborative acquisition of a UCAS in the future.

Mr Gray said: "The development of Unmanned Combat Air Systems is of vital importance to the UK and France, which have the most capable and experienced armed forces in Europe and wellestablished defence industrial bases.

"By working together and drawing on a common vision we will see military, technological and financial benefit and sustain skills to fulfil our mutual needs and aspirations in the combat air sector."

Mr Collet-Billon added: "The technological excellence of our defence aerospace industry must be maintained over the long term. It is a matter of

sovereignty and operational superiority. This requires an ambitious investment strategy open to partnerships.

"The Franco-British co-operation on the unmanned combat air vehicle FCAS meets this demand and paves the way for the future of the European combat air sector."

The Feasibility Phase programme between DE&S and DGA follows a Statement of Intent at the Anglo-French Security and Defence Summit at RAF Brize Norton in January and a Programme Arrangement at the Farnborough International Air Show in July this year, both signed by the then-UK Secretary of State for Defence and his French counterpart, Jean-Yves Le Drian.

The FCAS programme will sustain industrial capability and deliver major cost savings. It will also be complemented by separate national work, worth around £40 million, in each country.

Speaking at the event at Dassault Aviation headquarters on the outskirts of Paris, Mr Gray said the feasibility programme will provide a framework for the maturation of relevant technologies and concepts that support operations in high threat environments. He commented on how it is a very complex and exciting area of work that will take time, resources and collective commitment.

CDM said: "The strategic

representation here from both governments and defence industries sends a clear signal as to the importance both countries attach to delivering this phase of the FCAS programme.

"Our project teams and industry have achieved much to get us this far, and we all recognise there is more work to be done together. I look forward to working with you all on this important programme as we take this endeavour forward together."

Air Commodore Pete Grinsted, DE&S' Unmanned Air Systems team head, said: "I'm immensely proud of what the team has achieved. The award of FCAS Feasibility Phase contracts to UK and French industry is the culmination of a plan that was set in motion by the UK and French Premiers at the Anglo-French Summit in January. Since then the UK and French teams have worked closely and tirelessly to deliver contract award on schedule.

"The international collaborative approach has presented both challenges and opportunities but I am confident that we have the right government and industry team in place and that, over the next 24 months, we will develop the concepts and mature the technologies necessary to inform any future unmanned combat air system."

The programme will develop and







They gave their today

Staff pause to reflect on the victims of 100 years of conflict

econciliation between nations in pursuit of freedom, justice and peace was among the prayers as staff observed a particularly poignant Remembrance Day at Abbey Wood.

Hundreds packed the piazza in front of the Central Facilities Building for the annual two minutes' silence observed by DE&S' military and civilian personnel.

Prayers were said for servicemen and women who died in both world wars, and in conflicts across the globe since.

This year's event took on added poignancy as the UK commemorated the centenary of the start of World War One and the end of 13 years of combat operations in Afghanistan. Remembrance was marked by a message to staff from Defence Secretary Michael Fallon, reflecting those themes. "Though these servicemen and women are separated by 100 years, they are united in their shared commitment to preserving our country's values and our way of life," he said.

"As we remember and pay tribute to their bravery, I would like to offer my personal thanks to all those in our defence community, who work so hard day in, day out to support our Armed

"Since taking up my post in July, I have constantly been impressed by the dedication and professionalism of our military and civilian staff. By working together, we are creating the agile and flexible Future Force which is required to deal with the threats of a modern world, but which is also steeped in the traditions of those courageous servicemen and women who have gone before."

There were prayers in the piazza for current members of the Armed Forces serving on operations abroad, and prayers for their families, friends and all who hope and pray for their safe return.

Following readings, Last Post was played by a bugler before the two minutes' silence. The silence was brought





Wreaths were laid on behalf of DE&S, the Civil Service, Royal Navy, Army, RAF and Trades Unions by Bernard Gray, Chief of Defence Materiel, Pete Worrall (Chief of Materiel Joint Enablers), Rear Admiral Mike Wareham (Director Submarines), Lt Gen Chris Deverell (Chief of Materiel Land), Air Marshal Simon Bollom (Chief of Materiel Air) and James Riglar (DE&S Trades Unions representative) respectively.

Pictures: Andrew Linnett and David Tucker



50 years of submarine safety

From lost Malaysian airliners to the submarines of the UK's future nuclear deterrent, a working party's safety advice and rapid work ensures effective operation of the underwater fleet

ONE OF the longest standing MOD committees is celebrating 50 years of ensuring Royal Navy nuclear submarines are safe to operate.

The Safety Working Party committee sits on behalf of Commodore John Corderoy, Director Nuclear Propulsion and the MOD Naval Reactor Plant Authorisee (NRPA) around eleven times a year.

It brings together experts from the NRPA, DE&S' In-Service submarines and the Submarine Production Team, with industry partners such as Rolls-Royce as the plant technical authority and BAE Systems, the submarine builder, to name a few.

The committee advises on safety affecting naval reactor plants on inservice and future submarines and members are responsible for the

'We routinely endorse tactically and strategically important projects' – Cdr Martyn Boyes, DE&S Submarines



through-life safety of those reactor plants.

"Although it's often a challenge for people to consider nuclear safety case work exhilarating, the SWP routinely endorses or agrees tactically and strategically important projects," said Chairman Cdr Martyn Boyes

"For example the committee was required to approve earlier this year, at very short notice, a commission extension essential to support *HMS Tireless* so that the Royal Navy could help search for the missing Malaysian Airlines Flight 370 in the southern Indian Ocean."

The original purpose of the committee remains, but business has

changed dramatically. The 15th meeting – in 1965 – saw members discussing the adequacy of main isolating valves in the primary circuit to shut during abnormal

events. Minutes were typed and included hand-drawn graphs, a far cry from today's digital solutions.

With some ageing submarines in the Fleet, the committee is often required to assess the impact of agerelated defects and changing standards on the in-service plants.

But Cdr Boyes said: "In the next 12 months the SWP will consider, with a view to agreeing, the safety case substantiating the UK's first new submarine reactor design since the 1980s, a significant activity and one that is critical to delivering the new Successor deterrent submarine, which will replace the current *Vanguard* class submarines."

Over the 50 years, the SWP has had 20 chairmen presiding over 560 meetings with members drinking around 50,000 cups of tea and coffee. With the enduring requirement and support for nuclear submarines in the UK's Fleet, the SWP is expected to continue for many years to come.



Sir Malcolm Rifkind, right, is presented with a copy of *Keeping the Peace* by AWE Deputy Managing Director, Rob Fletcher

How UK-US co-operation helps keep world peace

AROUND 90 scholars and experts including Atomic Weapons Establishment (AWE) scientists gathered at the inaugural UK-US Project On Nuclear Issues Conference at Wokefield Park, Reading.

Sponsored by AWE and led by defence think tank the Royal United Services Institute, the two-day conference examined subjects of mutual interest to the UK and US.

Among special guests were AWE Managing Director, Kevin Bilger, former Defence Secretary Dr Liam Fox, and Sir Malcolm Rifkind, former Defence and Foreign Secretary.

Dr Fox provided an insight into the considerations behind the 2010 Strategic Defence and Security Review, and themes which

should appear in the 2015 update.

Sir Malcolm spoke about how through co-operation the UK and US are better placed to understand and respond to threats in a changing world.

Hardik Trivedi, Tom Hardwidge and Tom Plant of AWE gave presentations covering cyber warfare, the Comprehensive Test Ban Treaty, and arms control verification research.

Other subjects included nuclear disarmament, non-proliferation and nuclear co-operation.

An after-dinner speech on the AWE contribution to science, engineering and technology in the UK was given by AWE Chief Scientist, Professor Andrew Randewich.

Deadline set as MOD faces up to a commercial challenge

THE MOD has accepted the challenge of training a quarter of its senior civil servants in commercial learning by the end of next March.

And it aims to beat the target set by Cabinet Secretary Sir Jeremy Haywood by extending the opportunity to military 1* staff and above, particularly those involved

Susanna
Mason, Director
General
Commercial
and Head of
Profession for
Commercial,
said: "We need
to dedicate
more effort to
ensure staff,
particularly
senior decision
makers, are
aware of the

in acquisition.

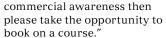
importance of commercial skills and take up training not to become commercial professionals, but to have a sound understanding of commercial approaches and strategies."

To ensure the training

available is prioritised to best effect, Heads of Commercial have been asked to nominate those colleagues at 1* and above who are currently or will be actively engaged with industry over the next few months, specifying which of the training on offer

would be most appropriate.

Ms Mason added: "I will be writing to those colleagues nominated, and the Permanent Secretary and Chief of Defence Materiel will be updated regularly on progress against the target to ensure that it is met by 31st March. If you are 1* or above and haven't been nominated but want to develop your



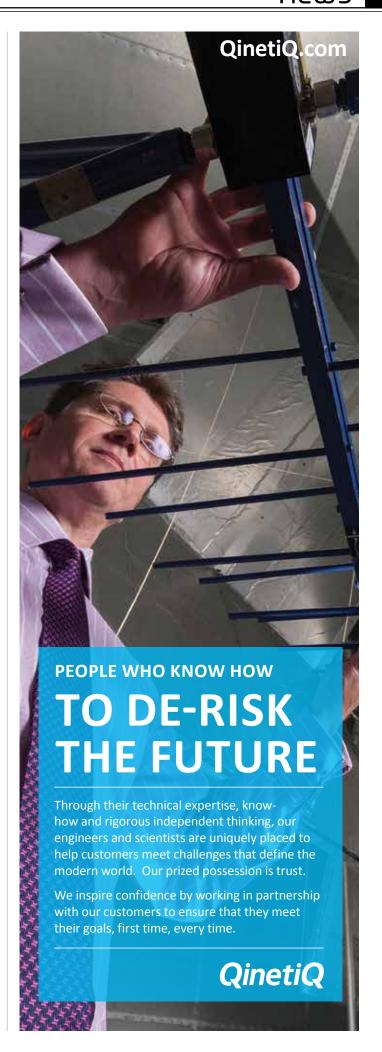
Any difficulties registering contact Keren Emery on ABW 32831 or by e-mail to Def Comrcl Cap-Skills-3



Pledge: Susanna Mason

ACTION PLAN

- to publicise the existing Crown Commercial Service course for senior civil servants 'Commercial Skills for Leaders'. This is also open to military staff at 1* and above. Courses are scheduled for 20th January, 11th February and 5th March, all in London, bookable via Civil Service Learning; and to run a 'closed' version of this course for MOD attendees including DE&S. These courses are scheduled for 13th January and 19th February. Details of how to book can be found on the Head of Profession (HOP) webpage (under 'useful links' on the MOD Commercial intranet website).
- to re-launch the existing 'Engaging with Industry' course as training in Commercial awareness for SCS and 1* military and above non-Commercial staff, titled 'Engaging with the Private Sector Being the Intelligent Customer'. This will be aimed primarily at those working in, or closely with, acquisition, at a variety of locations convenient for DE&S staff. Details of how to book will be found at the HOP webpage once dates and locations have been finalised.
- Heads of Commercial across MOD including DE&S will be engaging senior non-commercial colleagues both military and civilian in interactive sessions aiming at raising levels of commercial awareness.
- Changes in Commercial: page 43



IMPROVEMENT IN the way DE&S delivers its projects and programmes will be boosted by a new range of on-line tools and mechanisms to help teams make the most of past experiences.

The DE&S' Learning from Experience (LFE) strategy outlines how to manage lessons learned from hard-won experience.

The LFE Team has now placed the tools and mechanisms onto a new DE&S LFE webpage on DII, which contains comprehensive advice and guidance to staff. Pamela Jary, the team lead for LFE at DE&S, said: "We wanted to make information related to LFE accessible, relevant and easy to understand. The aim for LFE is to add real value and to become part of the 'DE&S Way' of working."

The LFE review process has been relaunched to provide an end-to-end approach to lessons management from identification, analysis and capture of lessons in a report, to managing and exploiting them and linking them to improved delivery.

A set of handy 'How To' guides has also



been developed to provide 'help on a page', showing staff how to go about applying the various LFE techniques, with more planned over the next couple of months.

Ms Jary said:
"There is a wealth
of really good
experience and
knowledge across

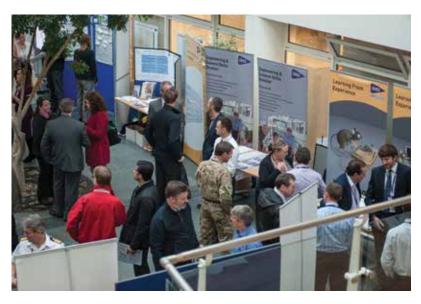
the organisation. The aim is to have an experience once and then use the learned knowledge many times wherever possible."

DE&S' LFE Champion, Air Vice-Marshal Julian Young, pictured, added: "DE&S operates in an environment that is highly complex and not so predictable. We need to improve the way we work, and deliver more effectively and efficiently our outputs in support of the Armed Forces. An important part of this is how we learn from our successes and setbacks. We cannot afford to repeat mistakes from the past."

More information is available from the LFE team at destech-lfe@mod.uk or on the DII web page.

'We cannot afford to repeat past mistakes'

On-line tools help put lessons learned yesterday into tomorrow's successes



Future careers: for Abbey Wood staff in engineering and management

First event, future careers, top skills

THE FIRST Engineering and Project and Programme Management day has taken place in Abbey Wood.

The event was well attended by staff looking to find out how they could further their careers in both areas.

Major partners helping with the professionalisation of the DE&S workforce were on hand to provide information on training and professional registration – including the Institution of Mechanical Engineers, Institution of Engineering and Technology, Association for Project Management, Chartered Management Institute, Defence Academy, University of the West of England and Cranfield University.

There was also support from teams in the MOD improving the ways engineering activities are undertaken including Guide to Engineering Activities and Review, Systems of Systems Approach and Learning from Experience.

Another event is planned for next June, following the Professional Engineers Forum on 29th January (places available for staff on e-solutions).

More information from DES Tech-AG PPM-L&D for PPM or DES Tech-EG EngPol-Skills-2 for Engineering.

Winter wellbeing takes centre stage at Abbey Wood

TWO NEW mental health initiatives formed a centrepiece of a successful Winter Wellbing day at Abbey Wood.

The initiatives - Mental Health First Aid, and Ecotherapy - help staff deal with emotional issues in their work/life balance.

In the same way as staff learn physical first aid Mental Health First Aid teaches how to recognise the crucial early warning signs of mental ill health (http://mhfaengland.org).

Ecotherapy is the name given to programmes that aim to promote good mental and physical wellbeing through outdoor activity in a green environment.

West of England Sport Trust (Wesport), Arthritis Care, Bristol Centre for Dentistry and The Charity for Civil Servants were welcomed along with two Reiki therapists ensuring plenty for staff to see and do throughout the event.

Information was also available on the upcoming Health Kiosk initiative being rolled out across MOD.

Feedback from staff was positive. Kevin Slade, DE&S Incident Manager, said: "I thought it was a fantastic event. The stalls were offering good advice on a variety of subjects and I was able to learn quite a lot. They also had a lot of literature to hand out,

which I found really useful, in particular the advice given to staff about self checking for catching early stage types of cancer in both men and women."

Chair of Abbey Wood's Wellbeing Committee, Ross Hill of DE&S Infrastructure, added: "Feedback from staff and market stall holders has been very encouraging and more events are planned over the coming months.

"The first committee annual general meeting is scheduled for February. We are keen to build on the successes of previous events and ask staff to submit suggestions or comments for consideration."



Above: delegates in the radiological crime scene exercise

Nuclear forensics aids national security

MORE THAN 80 scientists from the National Nuclear Security Centre of Excellence, accompanied by experts from UK law enforcement and other key organisations, came together last month to better understand nuclear forensics using a video-enriched scenario to share good practice.

Nuclear forensics is one of a number of vital disciplines where the Atomic Weapons Establishment provides UK Government advice and assistance as part of supporting national security.

The one-day event called Exercise Blue Beagle, and facilitated by legal training firm Bond Solon, involved an expert panel of counterterrorism investigators from the Metropolitan Police and other forces, forensics detectives, the Crown Prosecution Service and the London Fire and Rescue Service.

Panellists discussed good practice concerning the various stages of a radioactive crime scene investigation, enriching it with their own experiences.

Exercise Blue Beagle formed part of the Global Initiative To Combat Nuclear Terrorism (GICNT) nuclear forensics symposium last January in London.

It was the UK's contribution to the nuclear forensics 'gift basket' for the Nuclear Security Summit held at The Hague last March.

A masterclass in masterclasses

DE&S HAS launched a series of masterclasses to give staff first-hand knowledge of how teams have overcome issues with their projects.

The sessions at Abbey Wood will share team's experiences of contracting and dealing with stakeholders, giving people the opportunity to learn from other teams' experiences.

The first of the masterclasses last month was held by the Scout team, procuring the Scout Specialist Vehicle for Army 2020. Team leader Roddy Malone and his commercial and financial staff led the session along with Bernard Gray, Chief of Defence Materiel, on how to establish clear foundations for the project at the start and the use of best practice.

Sessions will also demonstrate the benefits to projects of sound leadership from senior team members.

DE&S' Chemical, Biological, Radiological, Nuclear team will present the next masterclass on 9th December.

Further masterclasses are due next year, including Project Marshall and Voyager.



Facilities earn a deserved Royal seal of approval





THE EARL of Wessex has seen at first hand the work of DE&S and industrial partner Daewoo in building the next generation of fleet support tankers in South Korea.

Prince Edward is Commodore-in-Chief of the Royal Fleet Auxiliary and was keen to learn how construction of the first of four ships – known as Military Afloat Reach and Sustainability tankers – was progressing.

He was visiting the Geoje shipyard of Daewoo Shipbuilding and Marine Engineering where he met company chief executive Ko Jae-ho and other officials and inspected the huge yards where the company builds its vessels.

The 38,000-tonne tankers will continue the RFA's valuable worldwide support to the Royal Navy.

"We will respond to the trust of the Royal Navy by delivering ships perfectly on time," said Mr Ko.

The ships, when in service, will form the *Tide* class. The first, *RFA Tidespring*, is due to enter service in 2016 with the other three at approximately sixmonth intervals.

Above left: Prince Edward is taken on a tour of the Geoje shipyard in South Korea while, above right, Prince Andrew meets Dr Graeme Nicholson, AWE Technical Director, (front left), AWE's Chief Scientist Professor Andrew Randewich (back right), Deputy Managing Director Rob Fletcher (back centre) and Dr Mike Baker, from the MOD (back left)

THE DUKE of York visited the world-leading Orion laser facility at the Atomic Weapons Establishment (AWE) in Berkshire last month.

Prince Andrew toured Orion as UK Patron of the International Year of Light 2015 – a United Nations initiative to raise awareness of light science and its applications.

Orion is a high-powered laser in a room the size of a football pitch and one of the largest capital science investments in the UK. The laser can create conditions similar to those at the heart of the sun and provides opportunities for building and sharing knowledge. Laser physics is essential to maintaining the UK's nuclear warhead stockpile in the nuclear test ban era.

While Orion was designed to support the UK's Trident programme, it will also drive developments in fundamental science and support laser fusion energy research which could play a key role in developing clean and affordable energy.

The Duke said: "It is not often people get the chance to really appreciate the work that goes on at AWE. What you are doing is absolutely important. Your establishment and in particular Orion presents an exciting opportunity for young people interested in a career in science and technology."

The MOD has agreed that up to 15 per cent of Orion's system time can be used by the UK academic research community for experiments which also contribute to the core programme. This helps encourage and excite a new generation of physicists.

AWE (www.awe.co.uk) is contracted to DE&S through a Government-owned Contractor Operated arrangement.

Acquisition staff handed new national security guidance

NEW GUIDANCE for DE&S capability planners and project staff who have to consider protecting the UK's technology advantage and national security is now available.

The guidance from DE&S Industrial Policy will help those who need to consider whether Operational Advantage (Op Adv) and Freedom of Action (FOA) are factors in developing their requirement, project or procurement approach.

The National Security Through Technology White Paper in 2012 set out the MOD's policy approach to procurement, which saw a move to open competition on the global market and buying off the shelf where possible.

It also identified the need to protect the UK's technology advantage – Op Adv and FOA – on grounds of national security.

As policy owners, DE&S Industrial Policy has worked with the Defence Science and Technology Laboratory over the past 12 months to develop a risk-based framework of questions to provide a 'handrail' through the decision-making process.

The framework has been piloted with the Front Line Commands and is designed to help collate evidence to support the investment approvals process. It asks questions about the capability under four broad headings: Do you understand it? Can you acquire it? Can you use it? Can you sustain it?

This framework and supporting guidance have been placed on the Acquisition Operating Framework (see link to Op Adv and FOA page and 'further information': http://aof.uwh.diif.r.mil.uk/aofcontent/strategic/security/free_actionops.htm). The Commercial Toolkit will be updated to reflect these changes.

The next phase of policy implementation sees DE&S Technology Delivery Strategy developing the framework with a project and portfolio focus, looking further at identifying Op Adv/FOA risk, and how supply chain risk can be addressed within the bounds of competition law and commercial practice to preserve national security.

For further information contact Sara Perring, DE&S Industrial Policy 3 on Main Building 78125.



West country staff pack up goodies for the children of Kyrgyzstan Above: job done as Air Vice-Marshal Julian Young hands over boxes to the charity Samaritan's

Left: backbreaking work for volunteers in the Abbey Wood sports hall

GENEROUS DE&S staff have handed over more than 700 Christmas shoeboxes full of goodies for children in Asia as part of an annual appeal.

The boxes from Abbey Wood, Corsham and the local community were presented to Sharon Benedict of the charity Samaritan's Purse by Director Technical Air Vice-Marshal Julian Young at Abbey Wood last month.

Operation Christmas Child, celebrating its 15th anniversary, is sending boxes of presents and useful items – toys, sweets, stationery, games, hats and scarves – to youngsters in Kyrgyzstan.

More than one million boxes are donated from the UK each year to children in schools, orphanages and other institutions regardless of their religious or ethnic backgound.

Thanks to the generosity of DE&S and wider MOD staff, children across Eastern Europe and Africa, who have been caught in the middle of conflict, natural disasters and extreme

poverty, will have something to enjoy this Christmas.

Every last item sent is put to good use, including the wrapping paper and box.

Jules Hurrell from the International Guns Missiles and Rockets team at DE&S has been organising the appeal at Abbey Wood for 15 years.

The MOD is the largest single donor of boxes in the south-west region.

The biggest donation from DE&S this year was of 94 boxes from Special Projects SCM team.

Class on a Plate - Abbey Wood's basketballers

ABBEY WOOD again provided a strong team to represent the DSRA (Defence Sports and Recreational Association) at the Civil Service Basketball tournament in Stoke on Trent on 31st October.

The team had a tough group and lost close games to Newcastle CS Panthers and the eventual winners from CS Scotland.

This put the team in the bottom half of the draw, where strong scoring performances from Matt Fisher and his

Abbey Wood teammate Tom Fail helped the team to take the Plate competition with a 28-9 win in the final.

Representing the team from DE&S were Abel Ferencz, Matt Fisher, Ben Bahnhall, Leslee Hallam, Chris Lafrenais, Stephen Porteous, Jeanette Gallen, Dominic Peake and Tom Fail.

Basketball will feature in the CSSC Games for the first time next year at Loughborough University on the 17th and 18th September.



Radar upgrade earns teams valued bronze

THE DE&S project teams delivering an upgrade to Radar Type 994 on *RFA Argus* have picked up a BAE Systems Chairman's Bronze Award for consolidated radar support.

It recognises the joint efforts of BAES and the MOD in enabling the costsaving efficient use of the RT997 in-service support contract to also support the RT994 upgrade.

DE&S James Hunter-Tod and Amanda Hobson joined Steve Newnham (BAES) at *HMS Nelson*, Portsmouth to collect the award on behalf of their DE&S/BAES joint project team.

Radar Type 994 is the air traffic management radar for *RFA Argus*, currently off Sierra Leone. The contract to upgrade RT994, which is only fitted to *Argus*, to support the ship until her out of service date in 2024, was awarded to BAE Maritime Systems last May.

The RT994 upgrade is a below decks replacement using RT997 components, which are best supported in-service together with the other 19 complete RT997 systems to be installed across the Fleet. The RT994 upgrade is scheduled to achieve Initial Operating Capability by February 2016.

The multi-disciplinary team is drawn from DE&S Ships' Maritime Combat Systems Communication and Situational Awareness (CSA), DE&S Weapons' Short Range Air Defence (SHORAD) and from BAE Systems Maritime, Cowes, Isle of Wight:

DE&S: James Hunter-Tod, CSA RT994U Capability Manager; Amanda Hobson, CSA RT994U Commercial Manager; Linda Diskett, CSA Radar Business Unit Leader; David Spicer, CSA Senior Commercial Officer; Paul Hollands, SHORAD RT997 Capability Manager.

BAES: Steve Newnham, RT994/997 Product Manager; Rick Shaw, RT994//997 Support Manager; Nick Sharp, RT994/997 Project Officer; John Atkins, RT994/997 Commercial Manager; Nigel Snook, Maritime Systems Business Development Manager.

Geoff is still leagues ahead of the field

THE FALCON team's champion orienteer Geoff Ellis secured his fourth consecutive UK Orienteering League title with an impressive performance at the November Classic at Ocknells in the New Forest.

The UKOL, originally the UK Masters Cup for 2011 and 2012, comprises 18 races over the year with the best ten scores to count.

The league is a true test of the complete orienteer, demanding excellence in all disciplines from night racing to sprints as well as urban and terrain orienteering.

The UKOL includes all British Championship races, of which Geoff was the British Night and Sprint Champion this year, as well as podium finishes in the Classic and Middle Races.

Geoff was strongly challenged this year by Will Hensman of Forth Valley Orienteers, but

it was his consistency across all terrains and formats that saw him run out a clear winner over the year.

His dominance of the men's 35-40 age category over the last four years was ably demonstrated with his run in the New Forest.

In heavy conditions underfoot Geoff flew round the 10.5km course in a mere 62 minutes, more than nine minutes clear of the nearest competitor. ☐ The Southern Night Championships took place north of Basingstoke, on a foggy November evening on terrain with brambles and low branches, one of which dislodged Geoff's head torch causing a head wound.

Although competing in the M35 category, Geoff ran the same course as the Open runners and topped the podium for the fourth time within his age group.

Jake clinches a Gosport engineering hat-trick

INNOVATION AND excellent engineering skills has earned an apprentice from Defence Munitions Gosport the Sir Henry Royce Memorial Medal for 2014.

Jake Briscoe designed and built a Taccola wheel, a perpetual motion energy machine, using 3D printing techniques during the final year of his apprenticeship.

It was entered into the competition to follow in the footsteps of other apprentices Craig Kitcher and Andrew Willoughby, who won the competition last year and Sam Jennings and Andrew Leadbeater who won in 2012.

The competition took place in October at the Sir Henry Royce Foundation in Paulspury, near Towcester where the apprentices from DSG Donnington, DSG Colchester and DM Gosport presented their competition pieces to four representatives of the foundation.

Jake said: "My overall experience of the competition was fantastic. I would recommend this experience to all engineering apprentices. It was a great opportunity for me to learn 3D printing techniques as it represents a different aspect of engineering.

"I have since been asked by the 3D printer company if they can use my Taccola wheel designs to demonstrate to schoolchildren what can be produced using this modern technology, and hopefully encourage them into a career in engineering."

The wheel will now be displayed at Gosport along with other competition pieces. Jake will be formally presented with his gold medal and certificate at the MOD's annual Apprentice Awards this month by the Duke of York.





It's a happy poppy

ROWERS AT Abbey Wood put their backs into it as the centrepiece for DE&S' mammoth contribution to Bristol's fundraising for the Royal British Legion's 2014 Poppy Appeal.

To commemorate the lead-up to the first battle of World War One when the British deployed to Mons via Boulogne, Calais and Dunkirk, rowing machines were used in a bid to cover at least the 164km of the original deployment, a figure achieved by the rowers with a few metres to spare.

Cyclists also managed nearly 800km on their machines with Abbey Wood collections and sponsorship money totalling more than £7,300, a major contribution to the Bristol total of £42,000.

Further collections around the site for the Poppy Appeal raised another £5,800.

"This is an amazing total, clearly bettering the amount raised last year (£26,000)," said organiser Wg Cdr Steve Chappell of DE&S' Logistic Commodities and Services.

"There are some collections yet to be fully counted but, regardless, it's a Herculean effort. When we consider the three aims were to increase awareness of the military in the community, raise money for the Royal British Legion and to appropriately remember those lost and injured in all wars and conflicts, then I think we can safely say we all helped to achieve these in abundance. We have certainly made Abbey Wood a major player in this regional fundraising effort."

Abbey Wood staffraised money in various places across the city from railway stations at Filton Abbey Wood, Bristol Parkway and Bristol Temple Meads to Bristol Airport, the central bus station, shopping centres at Cabot Circus and Cribbs Causeway and numerous local shops.

Bagpipes were played around the site while more musical accompaniment was provided by the Band of the Royal Air Forces Association under the direction of Land Equipment's Peter Skellon.

The day was marked by a visit to Abbey Wood from the Lord Lieutenant of Bristol, Mrs Mary Prior, and her husband John, and the one remaining British survivor of the World War Two Dambusters Raid, Sqn Ldr Johnny Johnson, who lives in Bristol.

1914 1918 Abbey Wood staff help Bristol raise thousands for annual British Legion appeal



Above: last surviving British Dambuster Johnny Johnson provided plenty of entertaining stories for Abbey Wood staff, who were generous in their donations to the final cash total, while, above right, Matt Rawlinson oversees two competitors in the rowing contest

Right: the RAFA Band, led by director Peter Skellon, provided a musical backdrop to the proceedings

Pictures: David Tucker



Lifesavers!

Staff earn thanks for their efforts to keep UK Forces safe on the front line

THE FIGHT to keep UK Forces safe in Afghanistan has seen a DE&S team narrowly miss out on one of the Civil Service's top accolades.

The Force Protection team, part of Director ISTAR, has delivered 29 Urgent Operational Requirements over the last five years.

From dogs to cameras and high-tech jammers the team brought kit into service which helped neutralise the lethal effects of roadside bombs and other improvised devices

The team was on a short list of three for project and programme management in the 2014 Civil Service awards.

Team leader David Penlington described their nomination as 'an incredible achievement'.

"We have been exceptionally fortunate in the past to be recognised by the Minister and the Chief of Defence Materiel for the work invested by the team in UORs over the course of many years.

"To now be praised at Government level for our project and programme management expertise is a fitting tribute to the professionalism, diligence and passion of the team, to the wider enterprise of the MOD and industry, and to those who have worked the midnight hours to counter the insurgent threat. I feel



Abbey Wood

ALAN PARAMORE received the best possible accolade to go alongside his runners-up award in a nationwide engineering contest.

While collecting his award, one of the other attendees at the Churchill Medal ceremony in Birmingham came up to shake his hand and thank him for his team's work in making sure a Ridgback crew survived a serious roadside bomb blast.

It helped make Major

Paramore's day, as he was at the ceremony to represent DE&S at the Churchill Medal, a reward from the Professional Engineering Institutions to the best engineers and technicians for ground breaking achievements. Finalists are ambassadors who demonstrate exceptional work towards support of the Armed Forces.

Major Paramore from the Protected Mobility Vehicles Programme was nominated for his role in the design, delivery and maintenance of the operational availability of the Mastiff, Ridgback and Wolfhound vehicle fleets.

Below: members of Force Protection, with team

leader David Penlington, front centre, are pictured at

He championed crossplatform compatibility across more than 750 vehicles, made up of 23 individual variants based on five main platforms.

Major Paramore was a runner-up to the eventual winner, SSgt Kevin Cuthbert of the Royal Electrical and Mechanical Engineers, recognised for his work on Operation Herrick 18.

"It was very gratifying to have had the significant role that this fleet has had within recent operations recognised in this way," said Major Paramore. "I was very honoured to

"I was very honoured to represent the dedicated and hard working team within DE&S that have made this impact possible."

Programme team leader Phil Tulitt added: "Since 2006 Major Paramore has been unrelenting in his drive and determination to upgrade and improve the UK Cougar fleet and its support solution."

Paul Stone, of event sponsor BAE Systems, said: "Talented men and women have made the connection between engineering and delivery of a front line capability. It is really important that their hard work and great skill has been recognised and I hope their achievements inspire others into careers in the Armed Forces and the defence industry."



Major Paramore is presented with his award by Air Vice-Marshal Tim Bishop AOC 38 Group (Chief Air Engineering Officer), right, and Paul Stone, Director Flight Operations at BAE Systems

privileged to have played a small part in that endeavour."

The team developed a reputation for success, adhering to the highest standards of project professionalism, combating risk, prosecuting challenging

schedules, reigning in costs and engaging stakeholders. The team met every deadline, delivered within budget and exceeded users' expectations.

The DE&S team was pipped by the Ministry of Justice's new education centre at Cookham Wood young offenders' institute.

The MOD was also one of four government departments who were members of the Cross Whitehall Syria Chemical Weapons Team nominated for the International Award.

The team: Andy Lison, John Taylor, Neil Cromarty, Gary McNab, Rich Nevill, Michael Gibb, Ian Punton, Paul French, Jane Roe, Michael Conway, Andy Keys, Tyler Griffin, Nick Blackman, Ed Tritschler, Paul Drayton, Thomas Bloomfield, Ben Kenneally, Iain Robert, Steve Maclaren, Colin Murray, Howard Fielder, Rob Mallinson, Mark and Anneka Davis, and John Widger.

The team's fundraising effort can be seen at: www.justgiving.com/ AviationCARE-2014



Pedals up: for members of the DE&S/industry Aviation team on its cycle round the west country. Left: celebration at a good job well done

MOTTO - the MOD Lottery September winners £10,000:

Jacqueline Johnson (Corsham). £5,000: Hugh Gray-Wallis (RNAS Culdrose). £2,000: Paul Gallacher (Abbey Wood). £500: Alison Jennings (Preston), Scott Ruthven (Clyde). £100: Rachelle Cox (Abbey Wood), Andrew Fletcher (Bath), Oliver Brown (Abbey Wood), Angela Crawford (Oakham), Nigel Roy (Devonport), Hannah Luton (Abbev Wood), David Neill (Belfast), Donna Gallagher (RAF Halton), Shirley Deeks (Abbey Wood), Neil Smallwood (Abbey Wood), Timothy Trew (Yeovilton). Alastair MacLean (Clyde), Christine Eyre (Sheffield), Ann-Marie Smerdon (Abbey Wood), Margaret Marshall (Pirbright), Malcolm Jones (Swanwick), lan Bond (Sutton Coldfield), Barbara Rookes (Catterick Garrison), Philip Cole (Sealand). Michael Wade (RAF

Henlow).

TEAM working in the Helicopters Operating Centre looks set to top £10,000 from a 90-mile cycle ride followed by a half marathon in the Forest of Dean

It is the fourth year in a row that the Aviation CARE team has accomplished an extreme physical challenge with the aims of having fun, getting fitter and raising money for charity.

Previous endeavours have included a 200-mile cycle to RNAS Culdrose and, last year, an 80-mile cycle followed by the New Forest Half Marathon.

The team has got fitter, shed

pounds in weight, and raised more than £25.000 for charity. This year's money will go to the Brainwave children's charity.

The cycle route followed quiet roads on the Somerset Levels with a challenging ascent through the Forest of Dean from Chepstow. The off-road saw the first member of the team cross the line in a time of one hour 22 minutes for overall victory in the Over 50s category.

Commodore Andy Lison, Head of Hels 1, said: "We always knew that this year's challenge was going to be a tough one and the team had to train hard in the build-up to the event. We were supported by colleagues, family and friends who worked to ensure everything ran smoothly and we could not have done it without them.

"This year's fundraising has already surpassed our target. This is a fantastic joint MODindustry team effort from people who care passionately about aviation and also about helping others. I am hugely grateful to our team of amateur athletes from DE&S, the Royal Navy, Lockheed Martin, AgustaWestland, Newton Consulting, Safran and Selex-ES."

Trafalgar Night fundraising pride



Celebration: Trafalgar Night in Bristol

MORE THAN 90 friends and colleagues from DE&S, BAE Systems, MBDA and Rolls-Royce gathered in Bristol to celebrate Lord Nelson's sea battles.

A talk on the life of Horatio Nelson and the Battle of Trafalgar was given by Lt Cdr (Ret) Nick Britton. Sea shanties were sung by local singers Storm Force 10.

A cheque for £1,500 raised on the evening, plus a further £1,000 from other events, was presented to the Pride of Bristol Trust.

The Pride of Bristol started as a marine patrol and training vessel, was purchased by the trust in 1997 and now teaches basic seamanship, coastal pilotage, ship handling, helmsmanship and safety at sea to young and disadvantaged groups, who benefit from co-operation with others and pride in personal achievement.

The Pride of Bristol is normally moored on the Hotwells side of Bristol Harbour.

MSP arrival sparks Materiel Strategy reshuffle

THE ARRIVAL of Managed Service Providers in DE&S brings to a close the current phase of work under the Materiel Strategy and results in some changes in DE&S leadership.

Bernard Gray, Chief of Defence Materiel, and the Executive Board have decided a Corporate Affairs Director is needed to operate at the centre of DE&S.

And a new Head of Communications has been appointed to bring a concerted focus on communications and engagement.

The new corporate affairs post will bring together strategic governance and reputation issues along with the leadership of Abbey Wood infrastructure and security issues currently delivered by David Ball.

This will be a key role at the heart of DE&S, supporting Paul Skinner and his non-executive colleagues as well as CDM and the Executive Board. It will also be an important focus for relations with the Treasury, the Cabinet Office and MOD HQ.

CDM has asked Barry Burton, who has spent the last 30 months leading the Materiel Strategy work, to take on this role.

Paul Blakiston, who has supported Mr Burton over the last year, retires from DE&S at the end of the year after more than 40 years with the MOD.

Richard Smart takes over leadership of the Materiel Strategy team as Acting Director for a few months while a recruitment competition is completed.

Another important change sees Sharon McKoy-Beckett join DE&S as Head of Communications.

Sharon joins from the Department for Business, Innovation and Skills where she was Head of Internal Communications.

Previously she was Head of Communications at Tata Steel's Long Products division in Europe after a career in marketing for the MEN Arena, Galaxy 105 Radio and MTV.

She said: "I'm really pleased to be joining DE&S at such a pivotal point. Effective communication with our stakeholders and staff is crucially important as we start to transform the organisation in order to better equip and support our Armed Forces, now and in the future."

Sharon will report directly to the Chief of Defence Materiel and will also support Barry Burton as the Deputy Director for Corporate Affairs.



Swapping places between Abbey Wood and Clyde

REAR ADMIRAL Keith Beckett, above left, has begun work as Chief Strategic Systems Executive at Abbey Wood, having taken over from Rear Admiral Mark Beverstock.

In turn, his place as Naval Base Commander at Clyde has been taken on by Commodore Mark Adams, right, in a handover towards the end of October.

Rear Admiral Beckett, in post for 13 months at Clyde, said: "My time in command of Clyde has been the highlight of my career. I have been fortunate to work with a tremendous team of people. We faced

considerable challenges on occasion but I like to think we put in place effective solutions each time. I wish everyone at the base all the very best for the future."

A mechanical engineering graduate, Commodore Adams is no stranger to Clyde, having served on a number of submarines. He has also been a member of a number of submarine teams at Abbey Wood. From May until his promotion to Commodore in October, he was Submarine Programme Director in the In-Service Submarines project team.

German liaison takes on a new look

MICHAEL FLOR is the new head of the German liaison team at Abbey Wood.

The 56-year-old father of four, pictured,

from Bad Neuenahr near Cologne, has a background in logistics having commanded a maintenence company and been deputy commander of a maintenance battalion.

He joined the National People's Army of the German Democratic Republic in 1976 and transferred to the Bundeswehr (Federal Armed Forces) in 1990 after the reunification of Germany.

Lt Col Flor has a degree in mechanical engineering and is a graduate engineer of the Russian Military Academy in Moscow.

"I was made very welcome in the Land

Other moves around DE&S:

Don Gaynor has taken over as Deputy Head of Change Management in Logistic Commodities and Services, a B1 post.

Jonathan Gilchrist has moved from Maritime Platform Systems to a new post in Commercially Support Shipping at B1 level. Domain and Army Customer Team led by Brigadier Colin McClean where everyone has given me a helping hand," he said.

"I am now 'combat ready' for my new assignment and am looking forward to a lot of chats, talks and meetings concerning the Materiel Strategy, procurement and logistics with people at DE&S and at Army HQ, the Defence College of Technical Training, and the Defence College of Logistics Policing and Administration."

Lt Col Flor has taken over from Lt Col Herbert Gotte for the next three years.

His MA, WO Dieter

Honecker, is due to be posted back to Germany next July.

Gp Capt Andrew Curtis has moved from High Wycombe to be a deputy head in the Joint Support Chain.

Tom Smith is to replace Capt Graham Charlesworth as the UK's Successor liaison officer from next month at B1 level as Capt Charlesworth moves to a vacant deputy head post with future submarines at Barrow.

STEVEN MORGAN. Director DE&S Commercial Operations, is taking up the 2* post of Director Professional Development with immediate effect.

The move was announced last month by the MOD's Permanent Secretary Jon Thompson who said the role would be solely concentrating strengthening professional standards of the Commercial branch.

"This is further evidence of DE&S's commitment to ensure DE&S Commercial is match-fit by 2017," he said.

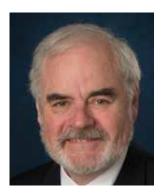
Mr Morgan will also be Deputy Head of Profession, a role he will share with Mike Greatwich to ensure that Commercial across the department is fully aligned.

Alan Peter will take on the role vice Steven Morgan Director Commercial Operations on temporary promotion until the end of an external competition.

General Director Commercial, Susanna Mason, has announced a number of changes to 1* posts that report to Alan Peter.

After five years in Ships Phil Tozer will move to Combat Air on 10th December. Neil Thompson will take on the role as Ships Commercial Head from 1st December. Mr Thompson has been with the

Operations head takes up a new Commercial post



Steven Morgan

MOD for the last two years and has been successful in ISTAR, letting the Marshall contract 12 months ahead of the scheduled date.

Darren Bone has left the Land domain to work in the Crown Commercial Service Cardiff Anna-Marie Barrow will take on the role temporary promotion from 8th December. She has worked in Combat Air and Air Support and completed a tour in Afghanistan.

In the Air domain, Bob Swales retires this month after a 40-year career. He

will return on a part-time basis with a specific role in February.

From 10th December the new Combat Air Commercial Head is Phil Tozer who brings experience of dealing with large programmes and the three suppliers, BAE Systems, Babcock and Rolls-Royce.

The move of Neil Thompson sees an external recruitment campaign for his replacement. Until then Colin Dakin will take up the 1* role on temporary promotion from 1st December.

There will be an external recruitment campaign in the New Year to find a 1* Contract Manager; until that time Steve Power will take up the role on temporary promotion. This role is relatively new and builds on work undertaken on a part-time basis. It emphasises the importance of Contract Management to DE&S and the department as a whole.

Mr Power has involved since the beginning of the initiative as a managing contracting officer in the Weapons Operating Centre. He is a seasoned commercial professional who previously worked in a number of DE&S operating centres.



Captain Alistair Willis, pictured, has left Clyde naval base after 18 months as Captain of the Base and Deputy Naval Base Commander, and Captain HMS Neptune. He is to take up a post as Head of the Maritime Logistic Improvement Programme at Abbey Wood.

5 - released this month

Defence Instructions and Notices (DINs) are defence-wide instructions, guidance and notices for military and civilian staff, containing up-to-the-minute information to help people carry out their duties. Some of the latest issued on Defence Equipment and Support are:

2014DIN04-177: This DIN covers Air Commodities project team's planned change to supporting contract provision and subsequent disposal of various obsolete aircraft components.

2014DIN04-195: This informs vessel and craft operators of the correct distress signalling sets they are required to carry on board and to provide information on those sets.

2014DIN04-203: To comply with the Safe System of Training policy the Generator Smoke Type 120 W6 Mk2 is no longer authorised for use during dismounted close combat training. It can still be used for fire fighting training. The Generator Smoke L4A1 has been introduced by land services to provide a smoke screening effect and should be used instead of the 120 W6 Mk2 for dismounted close combat training.

2014DIN04-212: All service personnel should be aware of processes under a new contract managed by CarillionAmey on behalf of the Defence Infrastructure Organisation for accessing defence housing services.

Further information and more details on the latest DINs see: http://defenceintranet.diif.r.mil.uk/Reference/DINsJSPs/Pages/DINsindex2014.aspx



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