





# **Bristol fashion**

RAF honours city by naming first A400M Atlas















# Winter wonderland

A COMMANDO takes aim during a troop attack demonstration in Norway. Royal Marines from M Company, 42 Commando, based at Bickley, Whisky Company, 45 Commando, from Arbroath in Scotland, and colleagues from the Surveillance and Reconnaissance Squadron and 30 Commando, based at Stonehouse Barracks, all part of 3 Commando Brigade, have spent much of the last month on winter training in Scandinavia.

# **FEATURES**

## 27 In pursuit of excellence

Teams at the forefront of procuring world class equipment and support have been recognised at the Minister for Defence Equipment, Support and Technology acquisition awards

#### 32 Pride of Bristol

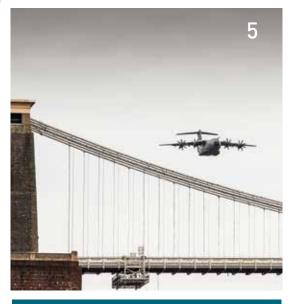
The RAF has honoured the contribution of the city of Bristol, including DE&S and industry, by naming its first A400M Atlas transport aircraft after the west country industrial hub in a ceremony at Airbus in the city

# 34 Warrior and Scout - progress in tandem

Two of DE&S' biggest land equipment programmes are heading towards a crucial hurdle. Progress is good but there is much work still to do, says the head of DE&S' Armoured Vehicle Programmes

#### 36 Kit moves on

DE&S has signed a contract for Virtus, a new personal protection and load carriage system, providing significantly improved capability for UK soldiers



# cover image

The UK's first A400M has been named City of Bristol by the RAF in a rare honour to highlight the important role industry in the city has played in delivery of the aircraft. Businesses involved include Airbus, Rolls-Royce, GKN Aerospace and Atkins

# desider

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#### Assistant Head, Corporate Comms:

Ralph Dunn - 9352 30257 or 0117 9130257 DESSec-CorpComms-AsstHd@mod.uk

#### Editor:

Steve Moore - 9352 30537 or 0117 9130537 stephen.moore544@mod.uk

## Distribution Manager:

Dick Naughton - 9352 34342 or 0117 9134342 DES HR-Corp-BusMgr1a@mod.uk

#### Advertising:

Richard Stillman – Ten Alps Media, 1 New Oxford Street, High Holborn, London SC1A 1NU Tel: +44 (0)20 7657 1837 Fax: +44 (0)20 7379 7155

richard.stillman@tenalps.com

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# **NEWS**

# 5 Just the job!

The commanding officer of the first RAF A400M squadron praises the contributions of DE&S and industry as the aircraft continues to impress

# 8 PM kicks off latest stage of Type 26

Investment in the next generation of Royal Navy frigates - the Type 26 Global Combat Ship - has been unveiled by the Prime Minister

# 9 Leidos given logistics nod

Leidos has been named preferred bidder for the Logistic Commodities and Services (Transformation) programme

# 10 RAF begins F-35 operational testing

The RAF's 17 Squadron has begun operational testing of the UK's first F-35B Lightning II aircraft in the United States

## 12 Typhoon set to up its game again

Integration of the Brimstone 2 missile onto Typhoon is part of a new contract to further enhance the fast jet's capability

## 15 Work starts on new comms kit

Options for the future of vital tactical communications equipment are to be explored in a new £11 million contract

# 17 Tidespring hits the water

Tidespring, the first of the new support tankers for the Royal Fleet Auxiliary, has completed her first float out in South Korea

#### 18 Chinook boost

DE&S has signed an amendment to in-service support for Chinook helicopters for the next five years



# Bernard Gray

Chief of Defence Materiel

'It is a pleasure and a privilege to work with a great group of people'



You will all be aware that I have come to the end of a four-year contract as Chief of Defence Materiel and leader of Defence Equipment and Support.

You will also know that in an announcement last month the Secretary of State for Defence has asked me to stay on and lead DE&S for another year.

We have a lot to deliver in 2015 and I am delighted to have the opportunity to lead DE&S and the great team of professionals who work within it through the challenges ahead.

This will be a pivotal year for DE&S. We have a General Election and the Strategic Defence Review to come.

None of us has any real idea what is going to happen in May but I want to make sure the voice of DE&S is greatly heard around the issues which are important to our programmes.

We will have to give clear advice on what the

right decisions on those programmes should be.

At the same time, we will continue to deliver the Defence Equipment Plan and push ahead with the implementation of the DE&S transformation.

We already have a number of successes to celebrate. I'm particularly proud of the work we've done on the Marshall project where we worked with our suppliers to deliver the programme 12 months early and the Scout programme where robust negotiations with our industry partners delivered better value for our customers and the tax payer.

These are great examples of how we are improving the way we do things in DE&S.

As I have said, it is a pleasure and a privilege to work with a great group of people and I value all that you do. Let's work together to make 2015 another successful year for DE&S.

Home from home: the RAF's first A400M transport aircraft makes a spectacular sight as it passes over the Second Severn Crossing between England and Wales

> Picture: Cpl Paul Oldfield, RAF



THE MAN charged with bringing A400M Atlas into service with the RAF has spoken of his pride at re-forming the first dedicated front line squadron to fly the aircraft.

Wg Cdr Simon Boyle leads 70 Squadron at RAF Brize Norton, the new home of the A400M.

"It is a huge privilege to be part of the team charged with bringing Atlas into service with the RAF and standing 70 Squadron back up as the first dedicated front-line squadron to operate the aircraft – a job that is as exciting as it is challenging," he said.

"To have the opportunity to work with colleagues at RAF Brize Norton, DE&S, from industry and European partner nations as we build the capability is immensely rewarding.

"There is no doubt that, while the hardware in the shape of the cutting-edge platform that is Atlas is central to all that we do, the success of the programme rests to a great degree on the partnerships between all those involved as we work together to unlock the aircraft's potential."

Wg Cdr Boyle said the various capability milestones over the next few years would take the aircraft from a strategic air transport aircraft to a state-of-the-art tactical airlifter. Atlas would therefore become the cornerstone of a modern and highly capable air mobility fleet at RAF Brize Norton.

# desider in April and May

Rules surrounding Government communications and the impartiality of civil servants in the run-up to a General Election mean *desider* will not be publishing in April. The magazine will be back in May with a joint April/May edition published immediately after the 7th May election.



"It has the speed, range and flexibility to respond to our Government's requirements from high-end tactical operations to humanitarian assistance missions, or in support of the British Army. We continue to develop the airborne delivery capabilities that sit at the centre of the Air Assault Task Force concept," he said.

"With the prospect of further deliveries throughout 2015, the portents are very good. From a pilot's perspective I am delighted to report that cockpit is a superb environment to work in and the aircraft is an absolute pleasure to fly."

Looking to the future Wg Cdr Boyle added there was still work to be done.

"We must work with Airbus Defence and Space to continue to develop the cargo hold in a similar vein," he said.

"There is much work to be done by both industry and the RAF at Brize Norton and beyond to ensure that the aircraft delivers on its great promise.

"But we have a dedicated and enthusiastic team of aircrew, engineers (both military and civilian) and support staff with considerable experience who I know are more than equal to the challenge – and a hugely capable platform as the basis for that success."

□ Pride of Bristol: the full story, pages 32 and 33



# Pride of Abbey Wood, pride of Bristol

DE&S' A400M team has spoken of the excellent support from industry in Bristol which has inspired the naming of the first transport aircraft.

'City of Bristol' was officially named by the RAF at a ceremony at Airbus in the city on 10th February.

"The DE&S project team which has managed this project has an excellent relationship with our industrial partners based in the Bristol area," said Air Commodore Stephen Wilcock, head of the A400M programme.

"I am delighted that in naming our first A400M Atlas 'City of Bristol' we have been able to recognise both Bristol industry and the A400M team's significant contribution in the manufacture, development and support of the A400M."

He added: "I know that the Royal Air Force crews who will operate the fleet as it builds up over the next few years are looking forward to the opportunity to exploit the advanced capabilities of this excellent aircraft which has already made its mark since its arrival in November."

# The changing face of DE&S...

# More staff rewarded for outstanding work

THE LATEST DE&S staff to receive bonus awards for outstanding performance in their work have been presented by Bernard Gray, Chief of Defence Materiel and members of the organisation's Board.

Awards were first made last year after the Board decided to use freedoms DE&S had gained as a Bespoke Trading Entity to recognise, reward and incentivise staff to deliver exceptional performance, acknowledging this through the new bonus system.

Nominations are considered by the Board every quarter and can be submitted through the line management chain.



# Latest bonus award winners

Christopher Sewell (Strategic Tanker and Air-to-Air Refuelling team): for delivering outstanding contributions to the Voyager programme, including resolving issues with ground support equipment, while also derisking the first operational deployment of Voyager to the Falkland Islands.

Nigel Butler (Equipment Support Continuous Improvement team): for using his extensive knowledge and expertise to spot potential efficiencies in equipment support, reaching a £250 million 2014/15 target of savings four months early.

Cheryl Bishop-Wells (Unmanned Air Systems): for leading her team with drive and determination to get the Watchkeeper unmanned air system into service against a backdrop of a late programme and sceptical stakeholder community.

Mick Brown (Project Marshall): for his drive in

accelerating the contract award for improving military air traffic management, securing significant commercial benefits, 12 months ahead of schedule with cost avoidance of £1 billion

**Gary Minns (Airseeker):** for helping the UK Rivet Joint aircraft to achieve high levels of availability during initial UK work up and on multiple operations through his knowledge of the US Air Force supply system.

Graham Hunter (Wildcat Helicopter Cat A Acquisition programme): for leading his team through a demanding 12 months introducing the aircraft into service – the Army Wildcat reached initial operating capability on time last August (a date approved in 2006) and developing contract support arrangements to provide essential support to front line fielding.

Lorna Thompson (Soldier, Training and Special Programmes team): for outstanding

performance in achieving milestones ahead of schedule on Project Virtus which will deliver 9,000 sets of personal protection and load carriage systems to the very high readiness forces.

#### Matt Prewett (Fast Air Support Team):

for being a key change agent in delivery of the FAST Financial Transformation Project and being at the leading edge of designing and implementing new financial structures to address long term issues in the team's financial management systems.

Martin Ross (Air Commodities): for reviewing plans and bringing the Mobile Elevated Platform Systems project back on schedule with his diligence, hard work and determination.

Dale Coxon (Weapons): for changing internal culture to transform an under performing financial management team into one that stands out within DE&S, building the DE&S professional reputation for improved financial management.



United: Joseph Collins of Bechtel, Bruce Berwick of CH2MHill, Bernard Gray, Chief of Defence Materiel, and PwC's Ian Tomlinson-Roe put pen to paper

■ Standards and behaviours of DE&S and its new transformation partners have now been formally set down

Bernard Gray, Chief of Defence Materiel, was joined by the heads of the three transformation partner companies in signing the charter which will govern how the organisation and the companies will behave as DE&S moves to its future status in 2017.

The Collaboration Charter describes ways of working for those involved in the business transformation that will help DE&S, Bechtel, CH2MHill and PwC to deliver successful outcomes. It sets the standards for how staff will work together, deal with difficulty and build a stronger DE&S.

Actual behaviours will be regularly compared with the defined standards. The Charter was developed jointly, based on inputs from the DE&S Executive, senior leadership team, people across the organisation and the three transformation partners.

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# **NEWSREEL**

# Prisons get down to work

PRISONERS will make sandbags, fence posts and other support products for UK Armed Forces in a ten-year agreement which will help offenders' rehabilitation and bring work back to the UK. A six-month trial has seen prisons produce 17,375 fence posts, 3,950 edge protectors, 128 refurbished hydraulic jacks, 250 burner boxes and 20.000 sandbags. A number of the products were previously made overseas, while items such as the hydraulic jacks will now be repaired rather than simply replaced.

☐ Project Claustum award: page 31

# Growth is key

LONG term growth offers the best route to balancing the nation's books and delivering national security, says defence industry trade organisation ADS. The group's 2015 manifesto, launched last month, urges the next government to commit to continuity on successful industrial strategies, invest in industrial innovation and support SME investment.

#### **Trident stays**

THE UK Government is not considering moving the strategic nuclear deterrent from its current base in Scotland. Lord Astor, Defence Spokesman in the House of Lords, has underlined. Clyde will become the Royal Navy's Submarine Centre of Specialisation, and home to all Royal Navy submarines by 2020.

# T26: PM fires starting gun on the latest stage

INVESTMENT IN the next generation of Royal Navy frigates – the Type 26 Global Combat Ship – has been unveiled.

The decision was announced by the Prime Minister on 20th February during a visit to BAE Systems in Scotland.

The contract with BAES is worth £859 millon and will sustain around 1,700 jobs.

David Cameron said: "This is a substantial investment in our shipbuilding industry, safeguarding the jobs of 600 workers in Scotland and many more across the UK. Investing in these warships will ensure we continue to keep our country safe, at home and abroad.

"As part of our long term economic plan, we're not just building the most advanced modern warships in the world – we are building the careers of many young people with apprenticeships that will set them up for life."

The Type 26 will be a multimission warship capable of joint and multinational operations across the full spectrum of warfare, including complex combat operations, counterpiracy, humanitarian and disaster relief work.

Defence Secretary Michael Fallon added: "This announcement is a vote of confidence in British industry and is part of our commitment to invest more than £160 billion in equipment and equipment support over the next ten years.

"Our military will have some of the most impressive and technologically advanced capabilities in the world; from the aircraft carriers and the F-35 fighter jets, to the Type 45 destroyers, Scout armoured vehicles, A400M and the Astute submarines."

The contract covers long lead items for the ships and shore testing facilities. There will also be investment in key equipment for the first three ships – such as gas turbines, diesel generators and steering gear – allowing suppliers to plan, invest and secure their workforce on the project.

BAE Systems Chief Executive Ian King said: "Through the Type 26 programme, we are transforming the way we design and manufacture naval ships with innovative new technologies, leading-edge processes and modern infrastructure.

"New ways of working ensure we can continue to deliver the highest quality equipment at the lowest possible cost and compete effectively for future UK and international orders."

The programme envisages delivery of 13 Type 26 ships to the Royal Navy. The first vessel is due to enter service in the early 2020s and the Type 26 class is expected to remain in service until 2060.

#### Some of the T26 equipment suppliers

Ship design, manufacture and integration, sensors, combat systems and radar technology: BAE Systems at Glasgow, Portsmouth, Bristol, Dorchester, New Malden and Cowes.

Sonar dome: AGC (Todds), Portland.
Helicopter Visual Landing Aids: AGI, Poole.
Air weapons handling: Babcock Group, Leicester.
Hull preservation: Cathelco, Chesterfield.
Gearbox: David Brown Gear Systems, Huddersfield.
Electric motor and testing: GE Power Conversion,

Cabins: Hertel, Glasgow and Middlesbrough.
Commissariate equipment: Kempsafe, Southampton.
Platform management system: L3, Bristol.
Mission bay, side doors, helicopter handling system:
Mactaggart Scott, Loanhead.

Crane, doors: Marine Systems Technology, Middlewich. Flexible coupling: Renold Hi-Tec Couplings, Halifax. Steering, stabilisers: Rolls-Royce, Dunfermline. Gas turbine: Rolls-Royce, Derby and Filton. Reverse osmosis plant: Salt Separation Services, Rochdale.

Valves: Score Marine, Peterhead. Firefighting system: Tyco Fire, Manchester



Future of the Royal Navy: David Cameron joins apprentices at BAE Systems for a look at the Type 26 Global Combat Ship



On land, sea and in the air: the transformation programme is set to improve efficiency in stock control of general supplies as well as storage and distribution, enabling better support to the front line

MEETING THE changing logistic needs of UK Forces will be one priority of the preferred bidder for the Logistic Commodities and Services (Transformation) programme.

logistic

transformation

Leidos, an experienced logistic and integration company, has been given the nod to ensure the MOD can continue to deliver services to the Forces at value for money for the taxpayer.

The transformation programme provide significant operational effectiveness by delivering improved responsiveness and agility. It will improve efficiency in warehousing procurement and stock control of food, clothing, general and medical supplies as well as storage and distribution. It is also expected to save around half a billion pounds over the next 13 years.

There are still a number of steps in the commercial process before the deal is concluded. But,

# New external contract aims to improve logs support to UK Forces

subject to contract signature, Leidos proposes to build a new defence centre next to the existing MOD site at Donnington in Shropshire.

DE&S' Chief of Materiel (Land), Lt Gen Sir Chris Deverell, said: "Our priority is to provide the best possible support to military operations and maintain levels of quality and service to our Armed Forces as well as being able to meet their changing needs.

"LCS(T) will significantly increase our ability to do that, while at the same time saving money for defence."

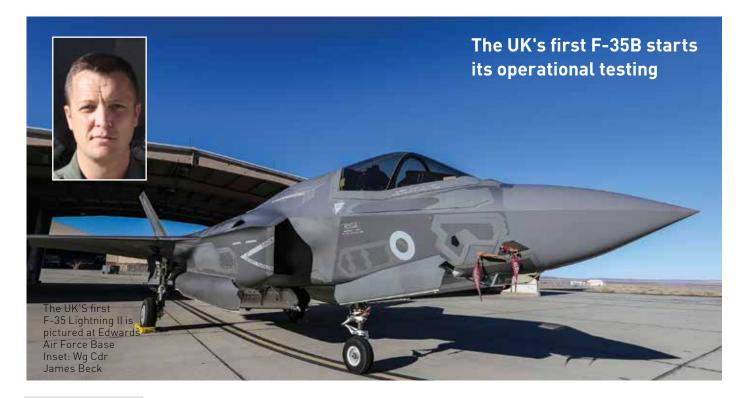
Leidos, formerly known as Science Applications International Corporation, has 20 years' experience working in defence, health and engineering.

The company will be supported by a team of subcontractors including Kuehne + Nagel, TVS, Agility and Thales.

Roger Krone, Chief Executive of Leidos "This contract represents an important milestone for Leidos and will enable us to bring decades of proven logistics performance to help transform UK Forces' storage, distribution and commodities procurement capabilities - all to ensure front line troops can get what they need, when they need it.

"This is a new and significant external contract for the MOD, whose team should be commended for its well-structured and managed procurement process throughout the last two years."





- The UK has taken delivery of three F-35B jets to date, based at Eglin Air Force Base in Florida, Edwards Air Force Base in California and Marine Corps Air Station Beaufort in South Carolina.
- An order was placed for a fourth UK aircraft in September 2013 which will be delivered next year. The UK also has a further four aircraft on order, which will form part of the UK's first operational squadron. It will transition to RAF Marham in Norfolk in 2018 which will become the main operating base.
- Significant UK sub-contractors to the Lockheed Martin F-35 programme include Cobham, GE Aviation, Honeywell, Martin Baker, MBDA, QinetiQ, Rolls-Royce, Selex Galileo, Ultra Electronics, EDM.

# 'For a pilot, this is a dream come true'

THE RAF has begun operational testing of the UK's first F-35B.

No 17 Squadron, first formed 100 years ago, will be responsible for all the test and evaluation of the F-35 Lightning II.

The aircraft, known as BK-1, is stationed at Edwards Air Force Base in California and will be operated under UK regulations.

Personnel from the squadron, which is made up of engineers and pilots from the RAF and Royal Navy, will fly and maintain the jets independently from their US colleagues – an important step towards the UK developing its Joint Strike Fighter capability.

Chief of the Air Staff, Air Chief Marshal Sir Andrew Pulford, said: "The start of UK operational testing on the Lightning II aircraft is a significant milestone for us, although our relationship with the US as partners on the Joint Strike Fighter Programme remains as strong as ever.

"Our collaboration with the US Armed Forces on the world's largest and most advanced defence project is a clear demonstration of our enduring close military partnership with the US."

The squadron's Commanding Officer, Wg Cdr James Beck, said: "For a pilot, it's a dream come true to fly from Edwards Air Force Base.

'The Lightning project team has worked hard to deliver this important milestone and I'm pleased we continue to make good progress towards achieving our initial operating capability in 2018'

- Commodore Rick Thompson,

DE&S Lightning II team leader

"It's where Chuck Yeager (regarded as the first pilot to have travelled faster than sound) flew from and now we're the first nation outside of America to fly the F-35 independently under our own regulations."

While testing and evaluation of BK-1 is underway at Edwards Air Force Base, more than 2,000 miles away at Marine Corps Air Station Beaufort in South Carolina, the first aircraft that will be used operationally – BK-3 – has just arrived.

Working alongside US Marine Corps colleagues, UK

personnel will fly BK-3, which will form part of the UK's first front line Lightning II unit, 617 Squadron, operating from RAF Marham and then the Royal Navy's new Queen Elizabeth class carriers from 2018.

# And work to welcome F-35 is set to begin at Marham

MORE THAN £300 million is to be invested at RAF Marham in Norfolk to help prepare for the arrival of the UK's first F-35B Lightning II squadron.

Work on infrastructure and facilities will begin by the end of the year.

This will create up to 1,000 new jobs in the construction phase and a further 700 in the supply chain.

The east of England will also become the heart of US European Joint Strike Fighter operations. RAF Lakenheath will become home to the first two US F-35 squadrons in Europe, with the first aircraft due to arrive in 2020. The move means that for the first time in decades the US Air Force and the RAF will operate the same type of aircraft from the UK.



# **NEWSREEL**

# All change at ADATS

DE&S sees the formation of the Air Defence and Electronic Warfare Systems delivery team from 1st April. The team will form out of the former Air Defence and Air Traffic Systems (ADATS) team which managed air defence, air traffic and ground based electronic warfare systems. With air traffic transferring to Aquila, a consortium of NATS Services and Thales UK, the retained elements of ADATS will be retitled. The new team will be based at RAF Henlow with staff at RAF Spadeadam and Sutton Coldfield.

# Carrier costs unchanged

OVERALL cost of the programme to build two aircraft carriers for the Royal Navy remains at £6.212 billion, according to the latest figures released in Parliament, Over the last four years, expenditure was £630 million in 2010-11, £670 million in 2011-12, £712 million in 2012-13 and £773 million in 2013-14.

# St Kilda repairs

ASSESSMENTS are being undertaken for repair work to buildings and equipment at the tracking station on St Kilda in the Hebrides following severe storms. As much of the work as possible will be conducted in parallel with an existing programme to upgrade equipment at the MOD Hebrides Range, which is under way and due to be completed this spring.



INTEGRATION OF the Brimstone 2 missile onto Typhoon is part of a new contract worth around £165 million to further enhance the fast jet's capability.

The contract was signed at an international defence exhibition in Abu Dhabi last month and includes a number of avionics and system upgrades.

It is expected to sustain more than 200 UK jobs based at BAE Systems in Lancashire and MBDA in Stevenage, Hertfordshire.

The Brimstone 2 close air support weapon will enable Typhoon to deploy the precision guided weapon against highspeed manoeuvring surface targets with low collateral damage.

The contract was awarded

# New contract will integrate Brimstone 2 onto potent attack aircraft

to Eurofighter Jadgflugzeug GmbH by NETMA – the Nato Eurofighter and Tornado Management Agency – on behalf of the UK, Germany, Spain and Italy.

Speaking at the International Defence Exhibition and Conference in Abu Dhabi (IDEX), Minister for Defence Equipment, Support and Technology, Philip Dunne, said: "This contract marks another significant milestone in the continuing development of the Eurofighter-Typhoon capability by delivering precision strike technologies, while also supporting highly skilled UK jobs.

"Brimstone missiles have been combat proven by the RAF on the Tornado fast jet in Afghanistan, Libya and Iraq and continue to prove their effectiveness in operations and provide our Armed Forces with precision capability to meet their air-to-ground demands."

Upgrades to the Typhoon made under the contract will be known as Phase 3 Capability Enhancements (P3E) and are expected to be delivered into RAF service in late 2018.

When integrated, each Typhoon aircraft will be able to carry up to six Brimstone missiles on two launcher packs of three missiles each.

# ☐ Latest Typhoon simulators handed over: page 19

# MOD invites the country to say 'thank you' to the Forces

COMMUNITIES across the country are being asked to show their support for servicemen and women this summer by holding Armed Forces Day celebrations.

Armed Forces Day will take place on Saturday,
27th June with a major national event in Guildford.

At the same time, people across the nation will be joining hundreds of local celebrations.

Communities can get support to hold their own Armed Forces Day event by applying for up to £10,000 from the Armed Forces Day team.

Last year hundreds of events took place nationwide. No event is too big or small – from

city-wide parades and local fetes, to simply getting together with neighbours for a street party, the aim of Armed Forces Day is to show support for the men and women of the Armed Forces community.

A maximum of £10,000 is available from the MOD and the funding should account for no more than 50 per cent of the total event cost.

Anyone interested in applying for funding must submit an application form by 27th March.

To find out more about the application process and funding criteria, visit www.armedforcesday.org.

Powering our nation's defences today. Creating a force for tomorrow.



# Collaborate more effectively with conferencing services from DFTS



BABCOCK IS to continue providing UKbased in-service support to the Royal Navy's Harpoon weapon system.

The four-year contract follows a competitive tender exercise run by the Torpedoes, Tomahawk and Harpoon project team within DE&S Weapons.

Harpoon is a heavyweight, long range, all weather, over the horizon, surface-to-surface guided weapon originally procured from Boeing (formerly McDonnell Douglas) through a Foreign Military Sales agreement with the US Department of Defense in the 1980s.

The system is installed on all Type 23 frigates and is in the process of being

integrated into a number of Type 45 destroyers.

The contract is managed through Babcock's facility at Devonport and covers a broad range of post design service activities in support of the day-to-day management of the Harpoon system as well as provision of technical support to the MOD.

Barry Paton, UK Harpoon project manager from Torpedoes, Tomahawk and Harpoon team, said; "Babcock is to be congratulated for winning this work via competition and the MOD looks forward to continued quality support for this weapon system."

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will keep
Harpoon
at the
sharp
end of
Naval
weapons

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Power: HMS Montrose fires Harpoon during a test on ranges in Scotland











# Work starts on next generation comms kit

OPTIONS FOR the future of vital tactical communications equipment used by UK Forces are to be explored in a new £11 million contract.

The contract has been awarded by the Information Systems and Services (ISS) Battlefield and Tactical Communications and Information Systems (BATCIS) team in support of the MOD's Morpheus Programme which will deliver the next generation of tactical communications and information systems used by front line forces.

The contract has gone to PA Consulting Group who will lead a team which includes QinetiQ, Roke Manor Research, CGI, Polaris Consulting Group and SVGC Technology.

Morpheus, currently in its assessment phase, is part of the wider Land Environment Tactical Communications and Information Systems (LE TacCIS) Capability Change Programme that will deliver improved tactical communications and information systems across the land environment.

A team of experts supported by MOD military personnel and acquisition specialists will spend around 15 months engaging with industry to identify innovative options for 'best of breed' design solutions for TacCIS. This will shape the next major evolution of information capability to meet the requirements of Future Force 2020.

The evidence produced will inform the next phase of design, principally determining whether UK defence should seek to sustain, evolve or replace the current Bowman system.

Brigadier Richard Spencer, BATCIS leader, said: "Awarding this contract allows defence the opportunity to really understand the options available to future proof the vital tactical communications capability used by our soldiers, sailors and airmen on operations and here in the UK.

"We will have a detailed understanding of current, near-horizon and emerging information and communications technology and importantly an opportunity to engage with industry to deliver the best kit possible for our troops in the future. It



A 'Makefast' engineering tool, part of the Bowman suite of Battlefield Information System Applications. A new contract will help decide whether Bowman is to evolve or be replaced

is this quest that drives us and we are excited to embark on this journey."  $\,$ 

Andrew Creber, defence expert at PA Consulting Group, added: "All members of the team are excited about this opportunity to work with the MOD on this key programme. Being impartial and having highly complementary skills, we are committed to identifying technical architectures and commercial business models that will ensure the effective exploitation of innovative technologies throughout the life of the programme."

# Barrelly Hassaware Cleas Barrelly Core

# Company proves the right package

BRISTOL COMPANY Import Export Services has become the latest to be accredited in passing rigorous standards to pack military equipment.

The Military Packagers Approval Scheme was introduced five years ago to make sure DE&S teams can source and contract for fit-for-purpose military level packaging via a register of approved commercial suppliers.

Packaging military equipment is vital in making sure kit arrives where it should in perfect condition and there are strict conditions companies have to meet.

Pictured are Mat' Boyd and Piotr Strugg from IES being presented with their MPAS certificate by Bob Deary, on the right, head of Defence Packaging at DE&S.

# **NEWSREEL**

# Afghanistan thank you

A Service of Commemoration to mark the end of combat operations in Afghanistan will take place on 13th March in St Paul's Cathedral, Attended by the Prince of Wales and the **Duchess of Cornwall** the service will also pay tribute to all in the UK who worked to make the country safer and more stable between, 2001-2014. Among those invited are representatives from units who served in Afghanistan, veterans and people from industry who contributed to the UK effort

# Boeing signs up

**BOEING Defence** UK has become one of the largest companies to sign the Armed Forces Covenant. The company, one of more than 300 Covenant signatories, will support employment of veterans and **Armed Forces** families; support employees who become members of the Reserve Forces; and give special consideration to holiday requests from service spouses and partners before, during and after a partner's deployment.

# Geo-licences

A £1.5 million contract has gone to iOra to continue supplying the MOD with licences for fixed and deployed nodes of Geo-Replicator, which provides British troops in remote or mobile locations around the world with mission critical data regardless of slow or intermittent network access.

# DE&S and the unions move forward

DE&S AND the five trades unions who represent staff have signed an agreement which gives the organisation the freedom to agree its own approach to union relations.

The Employee Relations Framework Agreement was signed on 2nd February between Bernard Gray, Chief of Defence Materiel, and staff representatives.

Signing was the culmination of several months of constructive consultation between Director Human Resources David Ball and his team and representatives from FDA, GMB, PCS, Prospect and Unite.

Previously DE&S, now a Bespoke Trading Entity, was party to a wider MOD agreement with the unions. The new agreement sets out the structure for successful engagement on DE&S transformation and day-to-day business, describing the principles and behaviours under which both parties will operate to ensure good employee relations.

Mr Gray said: "I am encouraged by the behaviours that have been displayed in reaching agreement on the Framework. which augurs well for future engagement."

One of the key tenets of the framework is the early sharing of information about proposed change. to ensure the unions have a genuine opportunity to influence.

The signing reinvigorates union engagement at a time of change for DE&S

staff. It aims to enable unions to engage on transformation

Bernard Gray, Chief of Defence Materiel, on the right, leads discussions with DE&S' trade unions

while also continuing to support members where required. Alan Grey, Chair of the DE&S unions, welcomed the agreement. He said: "It ensures that a real opportunity exists for the unions to influence outcomes and to reach agreement with DE&S. It also demonstrates that an environment supportive of trade unions exists in DE&S."

# 'A real opportunity exists for the unions to influence outcomes' - Alan Grey, Chair of the DE&S unions

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TIDESPRING, THE first of the new support tankers for the Royal Fleet Auxiliary, has completed her

South Korean shipbuilders DSME flooded up the massive No 2 dock, which already contains half a dozen ships in various states of build, last month.

After spending a few hours afloat, Tidespring was back on her blocks for more work to see her structurally complete.

It is pleasing to see RFA Tidespring taking shape in No 2 dock after much hard work by the project team in Abbey Wood, my team here in South Korea, and our oversight partner SeaQuest," said Royal Fleet Auxiliary Captain Jim Collins, project

# Tidespring hits the water



A month in the life of Tidespring - above left, the bow thrust unit block goes in; left, first flood up; above, maiden voyage; right, propeller shafts are made ready for alignment

oversight manager for the tankers. "There have been some significant milestones achieved during the last two months with the pace accelerating as we approach the third quarter of this year.

When RFA Tidespring will be undertaking contractor sea trials and preparing for her naming ceremony and acceptance, RFA Tiderace will be at the same stage of completion as Tidespring is now with RFA Tidesurge at the block assembly stage."

Capt Collins has been joined by deputy oversight manager Ian Brinklow and new platform assessor Tim Henshaw in being presented with People awards by DE&S Director Ships, Tony

# Tide class set to take a journey to Cornwall

WORK TO complete the fit-out of the next generation of fleet support ships is to be carried out in Cornwall.

A&P Group has been awarded a £15 million contract to fit self-defence weapons, protection ballistic communications systems to the four Tide class tankers, the ships being provided to the Royal Fleet Auxiliary by DE&S' Military Afloat, Reach and Sustainability programme.

The first of the ships is due in service next year with the fourth in 2018.

Minister Defence for Equipment Support and Technology, Philip Dunne, said:

"The vital customisation work being done in the UK on the Tide class tankers will enhance these vessels. This investment will provide the RFA with a tanker capability which will benefit the Royal Navy by supporting its current and future warships on operations around the globe, including the Queen Elizabeth class carriers.

The contract was announced by Chancellor of the Exchequer George Osborne on a visit to A&P in Falmouth.

The company be recruiting extra shop floor workers plus six new apprentices.

John Syvret, chief executive

of A&P Marine Services, said the contract would underpin the growth of A&P Group over the next five years.

Mr Syvret said: contract reflects the capability and capacity of A&P Group and is recognition of the calibre of infrastructure and workforce which exists in A&P Falmouth and across the group as a whole.

"The Tide class tankers are an example of the contracts and market opportunities that A&P Group can secure strengthening long term growth of A&P Group and driving employment opportunities which will result in strong regional economic growth."

# **NEWSREEL**

# Vallon kits are set for Iraq

GIFTING is set to begin this month to Iraq of around 1,000 surplus Vallon counter-improvised explosive device (C-IED) metal detectors. Iraq is currently facing a severe threat from IED attacks: the number, scale and lethality of which has increased in recent months. **Defence Secretary** Michael Fallon has announced. The UK will act as the coalition lead for the planning and co-ordination of all aspects of the C-IED training package for the Iragi security forces and also deploy a team to Erbil to provide training. The gifting package will complement that programme.

# **NEWSREEL**

# Commissioner for complaints

NICOLA Williams is the new Service Complaints Commissioner (SCC) for the Armed Forces, succeeding Dr Susan Atkins who carried out the role since 2008. Ms Williams will provide an alternative point of contact for Service personnel and others (such as family members or friends) who, for whatever reason, do not have the confidence or are not able to raise allegations of bullying, harassment, discrimination or other improper behaviour directly with the chain of command.

# Sign up to vote

**ROADSHOWS** will take place at military bases across the UK this month to increase electoral registration among the Armed Forces. They will offer registration on the spot using network-enabled tablet computers. Registering for the 7th May General Election on-line is simple and secure and can be done on a smartphone or tablet via www.gov. uk/register-to-votearmed-forces.

## C-130J range

**EXTERNAL** fuel tanks have been installed in nine C-130J transport aircraft at a cost of around £7 million, Minister for Defence Equipment, Support and Technology Philip Dunne has told Parliament. In addition to increased air-to-air refuelling capacity, the external tanks have extended the range of the C-130J to around 3,000 nautical miles.



Looking forward: Prime Minister David Cameron, right, looks on at the Chinook contract announcement

DE&S HAS signed a £420 million amendment to in-service support for Chinook helicopters for the next five years, ensuring the RAF's fleet remains at the forefront of the UK helicopter force.

The amendment to the Chinook Through Life Contract Support arrangements incorporates several new elements of scope, including the newly arrived Mk 6 helicopter and enhanced software support. This will be at a lower cost, on a like-for-like basis, than the current period, saving around £150 million for UK taxpayers.

The fleet will be maintained at Fleetlands, Gosport, and other technical support will be provided from RAF Odiham and other sites in the UK.

The announcement was made by Prime Minister David Cameron on a visit to Portsmouth last month.

He said: "The Chinook

# Prime Minister announces new support deal for Chinook

support contract represents significant value for money for what is a very capable and versatile support helicopter, protecting UK interests at home and abroad. This will sustain 450 jobs.

"As part of our long term economic plan, we are making major defence investments in areas like Portsmouth and the announcement demonstrates our commitment to this great city and region."

The amendment comes out of the extremely effective working relationships between the Chinook team in DE&S,

the operational users at RAF Odiham, the prime contractor, Boeing, and other key industry partners such as Vector Aerospace and Thales.

Support from Boeing Defence in the UK and USA has been essential in maintaining Chinook, especially during Operation Herrick, and the Chinook will remain critical to defence capability during the return to contingency.

David Pitchforth, Managing Director, Boeing Defence UK, said: "Having started my career as an apprentice, I value Boeing UK's continued investment in developing jobs, skills and opportunities in the UK's defence and security sector."

Chinook is the UK's only military heavy lift helicopter, able to transport up to 54 troops or ten tonnes of supplies.

With the new Mk 6 the RAF's fleet will be 60 strong by early 2017.

BAE SYSTEMS and Magma Structures have been chosen as the preferred bidders to occupy the Portsmouth ship halls.

BAES will use the ship halls facility to improve the maintenance programme of the Royal Navy's Hunt class mine countermeasures vessels.

BAES' occupancy of the ship halls will sustain around 200 jobs in Portsmouth. A new manufacturing base would secure Magma's workforce of around 180 in the city with the

# Portsmouth faces bright future

potential for future employment growth.

A third company, Burgess Marine, remains part of the ship halls commercial process but any agreement with it is dependent on the company obtaining an order.

This announcement adds to the £100 million investment in Portsmouth naval base that will

ensure the city is ready to become the home of the Queen Elizabeth carriers in 2017

Some of that money has been awarded to construct the jetty and other port infrastructure, provide high-voltage power and navigational aids necessary to berth the carriers.

☐ The Princess Royal has viewed a Royal Navy warship from the depths of a huge dry dock during a visit to Portsmouth last month.

The Princess climbed down 50 giant steps to see beneath *HMS*Westminster – the first ship to be refitted in the newly-refurbished 15 Dock.
In her role as Commodore-in-Chief Portsmouth, she met the crew of

In her role as Commodore-in-Chief Portsmouth, she met the crew of the Type 23 frigate and workers from BAE Systems who are carrying out the 20-month upgrade including work on the flight deck, bridge, galley, control centre and 4.5-inch gun.

The £6 million refurbishment of 15 Dock is part of relocation of activities to free up space for the two new aircraft carriers.

UK send kit to help out in Ukraine THE UK will provide further non-lethal support to Ukraine by sending advisory and short-term training teams to build the capacity and resilience of its Armed Forces.

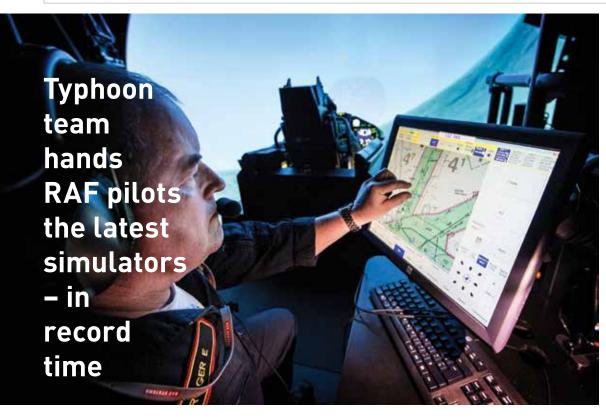
Teams will provide medical, logistics, infantry and intelligence capacity building training from the middle of this month.

The majority of training will take place in Ukraine, well away from areas affected by the

conflict with rebels in the east of the country.

Included in the training will be a 'train the trainer' package so that Ukrainian personnel can develop the capability to train their own personnel in due course.

UK personnel will be using individual first aid kits to support training and will seek to gift further kits to help support the ongoing Ukrainian capacity building effort.



Facing the future: RAF Coningsby's simulators will deliver training to the latest Typhoon standard

☐ With a growing requirement for Synthetic training DE&S' FAST Typhoon team has worked with the RAF to fulfil this by increasing the number and fidelity range of flight simulators available which has then allowed the live/synthetic blend to decrease from 80:20, consequently reducing live flight training.

☐ The use of synthetic training is safer for training pilots for emergencies and is dramatically cheaper than live flying.

☐ Since 2010 there has been a 25 per cent increase in synthetic training through better use of resources and higher serviceability of the assets.

☐ The goal is to reach a 50/50 blend of live and synthetic training by Future Force 2020.

ACCEPTANCE INTO service of the latest simulators to train Typhoon pilots inside 14 months of receiving the requirement has been described as a 'truly fantastic achievement'.

DE&S' FAST (Fast Air Support) Typhoon team, working closely with industry, supplied the first simulator to deliver vital training at the latest aircraft standard at the end of January.

A second was due to be accepted into service at RAF Coningsby as **desider** went to press.

Andy Green, DE&S Typhoon Aircrew Synthetic Training Programme Manager, said "This is a truly fantastic achievement which

'A fantastic achievement only made possible by drive, determination and professionalism' - Andy Green, DE&S has only been made possible in such short timescales by the drive, determination and professionalism of all those involved.

"The project increases and enhances the existing training capability, reducing overall cost to MOD while raising the profile of synthetic training and the great work that the team undertakes."

Sqn Ldr Paul Hanson, HQ 1 Group, added: "The timely delivery of these synthetic devices will provide a vital addition to Typhoon Force pilot training. In particular, they will enable training in simulators that are absolutely concurrent with the latest aircraft software and hardware standards and will thus significantly enhance operational capability.

"The manner and speed of delivery shows again the benefit of the deep integration between industry, DE&S and the RAF for the Typhoon programme."

Delivery was a result of teamwork between the RAF, DE&S FAST Typhoon team, BAE Systems Warton and the Typhoon Training Facility staff.

# **NEWSREEL**

# Navy signs up young talent

DERBY'S University Training College has become the fifth college to join a Royal Navy scheme to develop engineering and technical skills. Students will work on projects designed by Royal Navy engineers visit naval facilities, and gain careers advice. Minister for Defence Equipment, Support and Technology, Philip Dunne, said: "This new affiliation will develop a nuclear curriculum, working with Rolls-Royce Submarines Division to give students the opportunity to inspire the next generation of scientists and engineers." The four other colleges are in Plymouth, Bristol, Salisbury and Workington.

## **BMT** review

**BMT Defence** Services has been awarded a contract to provide a risk-based review of surface ship technical publications. The five-year contract covers separate work packages for marine and weapon engineering and will run for a period of five years. It is part of a Navy Command remit to review and update publications to maintain the operational capability, availability and safety of the surface fleet. The project will be undertaken at BMT's offices in Weymouth and Bath.



THE LAST Terrier engineering vehicle, upgraded to its final accepted build standard (FABS), has left BAE Systems in Newcastle, marking the end of production at the Armstrong Works.

Terrier's life began with a ceremonial hull plate cutting of the first production vehicle in January 2010.

Bernard Gray, Chief of Defence Materiel, unveiled the completed vehicle at a ceremony two years later, after which Terrier went on to achieve its in-service date – 20 production vehicles – inside Approval in April 2013

Successful reliability trials resulted in minor updates to the final build standard, which was completed while most vehicles were still in the factory. This meant fielding of a single build standard to Army units.

Terrier Project Manager Heath Wardle said: "Fielding the one, final build standard significantly reduced the costs of additional training and support for differing build standards and avoided the risks associated with swapping vehicles in and out of units for upgrades.

"The fleet of 60 vehicles is now moving into service, completing collective training at the British Army Training Unit Suffield (BATUS) and supporting various exercises in its role for the Royal Engineers.

"This is giving the vehicle the opportunity to demonstrate its key capabilities of 'digging and running' in support of other battlegroup vehicles – which is why the name Terrier was originally chosen."

Five Terriers from BATUS have now returned to BAE Systems in Telford, where they will be stripped to receive their remaining FABS upgrade.

This post-mortem will enable the project team to understand the detail of any issues arising from the exercise – enabling better future support.

This work should be completed by the middle of this year.

Terrier has been technically challenging. The programme was delivered at some cost to the supplier BAES and with a delay to acceptance for the MOD. When the programme was

struggling, the commitment from all parties saw it through to a successful conclusion.

Head of DE&S Armoured Vehicles Programmes, Major General Robert Talbot-Rice, said: "Delivery of this Terrier vehicle marks a major milestone for the BAES team in Newcastle. I congratulate them on producing a first class capability for the British Army."



# Weapons celebrates ten years of Herrick support

FOLLOWING MORE than ten years of Operation Herrick in Afghanistan, the DE&S Weapons Operating Centre held a review, above, of its achievements supporting UK Forces in theatre.

As well as sustaining delivery of safe, battle-winning weapons, often reacting to urgent requirements, the Centre teams most involved – Defence General Munitions; International Guns, Missiles and Rockets; Maritime and Air Weapons; Defence Ordnance Safety Group; and Defence Munitions – showcased their contributions.

Between them, they procured, supported and supplied all ammunition and explosives used in theatre from bullets, mortars, cannon rounds and artillery shells to missiles used by soldiers, and missiles, rockets and bombs fired from aircraft and helicopters, as well as self protection guns on helicopters.

The event was concluded by Director Weapons, Laurence Bryant, who said: "The Armed Forces rely on us at Abbey Wood and industry to provide them with weapons which meet their requirements, which operate safely and reliably when needed in the heat of battle, and not to run out. I am extremely proud to say that's exactly what the Centre managed to achieve during Herrick."



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# A framework for the future

This year the UK holds the leadership roles of OCCAR, the European armament organisation. Director *Tim Rowntree*, a former senior figure at DE&S, shares his thoughts on current and future business as his organisation prepares for a visit to Abbey Wood

reated around 14 years ago to solve the problems of previous co-operative programmes, OCCAR manages about 45 per cent of all co-operative European defence programmes, or £3 billion per year.

This year, the UK holds the major leadership roles – alongside me is Air Marshal Simon Bollom, DE&S Chief of Materiel (Air), who is chairman of the OCCAR Board of Supervisors.

OCCAR comprises six member states: Belgium, France, Germany, Italy, Spain and the UK, with around 230 staff and an operating cost of just over one per cent of the programme budget.

Current programmes include the A400M transport aircraft entering service with the RAF. Others are Boxer (armoured vehicle), COBRA (counter battery radar), ESSOR (software defined radio), FSAF-PAAMS (air defence missile system), FREMM (multi-mission frigates), MUSIS (space based imagery sharing) and the Tiger (attack helicopter).

However, OCCAR's portfolio continues to grow rapidly, with the integration this year of programmes involving maritime mine countermeasures, multi-purpose combat ship, logistic support ship and multi-role tanker transport.

OCCAR's executive administration comprises a central office in Bonn and dedicated programme teams in Bonn, Paris, Toulouse, Rome and La Spezia.

The organisation's success is based on:

- Efficiency: OCCAR seeks best value-for-money driven by healthy competition. Across all programmes, all nations and all time, cost-share and work allocation should stay naturally in balance through a principle called Global Balance, as opposed to the principle of national costshare equals industrial workshare on a programme basis. This efficiency principle also includes fair and open competition for OCCAR posts.
- Openness to other European states:
   OCCAR programmes are open to
   participation by other European
   states on fair and equal terms,
   whether they are OCCAR member
   states or not. There are now six non OCCAR nations participating in
   programmes.
- A strong legal and commercial framework: this protects participating states by applying best commercial and programme management practice to all programmes, and by ensuring that participating states are held harmless from the effects of decisions made by other partners.
- Empowered programme teams within a multi-programme organisation: the OCCAR construct provides strong governance and support from a lean and effective central office, while the programme

divisions focus primarily on their specific programme delivery under the direction of the participating states.

We are already heavily involved in initial or full support of most OCCAR programmes, but we aim to demonstrate the benefits of greater co-operation during the in-service phase, for example global support for A400M.

In capability terms, through-life co-operation based upon common configuration control, more effective management of obsolescence, common capability upgrades and clearances, shared spares pools and common maintenance regimes provides mutual support in times of operational need. To me, this is a real opportunity for our nations, and one we must grasp.

I am convinced OCCAR offers a successful framework for future cooperation in Europe. This comes with its own particular challenges, mainly merging different national needs to achieve a common direction. This requires mutual trust, understanding and camaraderie at the programme level which, for the most part, we achieve.

I am proud, as a British European, to lead the OCCAR Executive Administration, supporting the UK and its European partners with first class equipment.







# Meeting the need for training and simulation

DEFENCE AND Security Equipment International (DSEI), recognised internationally as the market leading exhibition for land, sea and air applications of defence and security products, technology and services, will take place at ExCeL London between 15-18 September 2015.

Organisers Clarion Events are building on the record-breaking success of the last DSEI which was staged in 2013 and saw more than 32,100 visitors from 121 countries worldwide, including 158 programmed delegations, engaging with 1,489 exhibitors representing 54 different countries. Military training, simulation and education will form a key pillar of DSEI 2015.

# Meeting military need for training and simulation

As many of the world's armed forces continue to counter complex threats within the margins of an ever-more-restrictive budget, military training remains at the centre of defence and security. While economic factors are causing nations to downsize their forces, training is increasingly seen as a vital enabler and force multiplier by countries seeking to maintain necessary levels of capability. Indeed, at the last edition of DSEI the Chief of the Air Staff, Air Chief Marshal Sir Andrew Pulford, explained that for the RAF to retain the current level of capability in the face of lower budgeted flying hours, it will need to increase its reliance on synthetic training.

Training is essential for all military personnel, enabling the performance of physically and mentally demanding tasks at the highest levels of proficiency while operating in stressful and dangerous environments. However, training extends beyond the frontline, certifying individuals across occupational specialties, including cooks, dog handlers, tank turret repairers, radar technicians and medical personnel.



#### **Evolution of innovation**

Evolution in simulation technology means military professionals are now able to immerse themselves in increasingly realistic and high fidelity training environments. Moreover, the training providers who originally developed solutions specifically for military contingency are enhancing their offering with dual applications for the civil sector. This crossover is best demonstrated by the combined response of civil departments and the military to natural disasters which, unpredictable and volatile, can only be overcome through preparation and training.

Providing a platform for global innovators to demonstrate pioneering equipment and expertise, DSEI 2015 will

present the international defence and security audience with those that are driving this momentous technological evolution.

Duncan Reid, DSEI 2015 Event Director said: "DSEI is well placed to identify and analyse new and emerging trends in the global defence market and this is reflected by the broad mix of exhibitors which will display the latest military training and simulation innovations. The on-going evolution of the defence landscape has required the armed forces to be trained to deal with a diverse range of operations from Ebola to counter insurgency operations. DSEI provides a unique setting to showcase the on-going initiatives taking place in our industry and how these technologies can be applied across many domains and new markets."

# The future of cost effective training

DSEI WILL showcase capabilities, technologies and innovative solutions that help militaries train cost-effectively and for the long term, while maintaining readiness to mitigate a multitude of threats.

DSEI exhibitors include Airbus Military, Babcock International, BAE Systems, BMT Group, Chemring Ordnance, Finmeccanica, Lockheed Martin, and Saab. Collectively they offer everything from dynamic mission simulators to tablet based training technologies.

- ☐ A major player on the military training scene, Serco enables the training of national security personnel through its services at the Defence Academy of the UK. Serco also trains JHC aircrew at RAF Benson and manage the Cabinet Office's Emergency Planning College, the government's training centre for crisis management.
- ☐ Chemring will put forward innovative training products such as its IED Simulator, which is designed to replicate operational procedure and produces a bright fireball

- with smoke. The company's inventory includes the Omega 1P, a next generation electronic firing pistol.
- ☐ Israeli exhibitors ELI Systems offer numerous training solutions. ELI's forward observer and battle simulator, Alfons2M, is a virtual environment based on real and existing terrain in Estonia. .
- ☐ Nammo will showcase its inventory of training solutions including Plastic Training Ammunition designed to provide military forces and law enforcement communities with realistic training and maximum safety at low cost.
- ☐ Malvern-based 3SDL provides a broad range of training consultancy services, including detailed Training Needs Analysis, and specialised courses in development and delivery.
- ☐ UK based Harquebus is responsible for training intelligence teams of Counter Terrorist Special Forces.

# Scout's honour!

✓ This was an honour indeed although I hadn't registered the fact that one team would
be selected for a special award at the ceremony itself until I arrived at the event. In
chatting to other staff across the various teams I wasn't alone.

Hence it was a pleasant surprise to be called forward by the Minister to accept the award on behalf of the Scout team. Moreover, to be chosen from a short list of candidate projects that all seemed very deserving, was recognition indeed.

An award such as this provides an excellent means to celebrate the skills diversity of all of the team members as well as the wider stakeholder efforts, recognising the combination of staff across the domains of project, finance, commercial, military, external support and others, be they based in Bristol, London, Andover or elsewhere, working as one.

Being able to bring eleven members of the team to the Awards also meant I could represent this broad range of skills at the Awards and in the post-event network session in Main

While this award has certainly given us all a boost and vote of confidence, the team's feet remain firmly on the ground.

To this end, it's worth reflecting on a few lessons – scars! – we picked up along the way as this will help us and other interested parties; the importance of keeping on top of staffing and skilling and the retention of our corporate knowledge in managing the project and enforcing the contract; the need for flexibility where sensible, and rigidity at all other times; keeping our ambitions sensible, and rigidity at all other times; keeping our ambitions realistic and in check and, above all, ensuring the buy-in and support of senior stakeholders at all times, not just at the tricky

I extend a big public thank you to everybody, inside and outside the team, who helped in delivering the achievements that subsequently made the award possible and to the award panel members in voting for the Scout team – they certainly know how to keep a secret and spring a last minute.com surprise!

DE&S' Scout Specialist Vehicle project earned special praise from the MOD at the annual acquisition awards, selected by Philip Dunne, **Minister for Defence Equipment, Support** and Technology. Roddy Malone, team leader at the time, tells of his surprise and delight, and points to some lessons for all teams to learn



# In pursuit of excellence

Teams at the forefront of procuring world class equipment and support for the Armed Forces have been recognised at the Minister for Defence Equipment, Support and Technology Acquisition Awards

# Exactor project team (team leader Richard Uren):

The team completed the major upgrade of the Exactor missile capability – a new and complex launcher system called Exactor 2 – in Operation Herrick to cost and time, exceeding the user's performance requirements while sustaining operational capability throughout the transition. Exactor was an urgent operational requirement to replace an existing capability already in theatre.

# Future Anti-Surface Guided Weapon (FASGW) project team (team leader Stephen Bishop):

FASGW is a complex missile development programme for the Royal Navy's Wildcat helicopter encompassing two complementary missiles, FASGW (heavy) and (light). The heavy version gives vessels an anti-ship capability while the light missile can target smaller inshore patrol craft. The team took two missile systems through separate Main Gate approvals in 18 months.

#### Strategic Transport and Air-to-Air Refuelling project team (team leader Chris Dell):

The STAAR team manages the complex and ambitious Private Finance Initiative programme – the biggest of its type in defence – for delivery and continued maintenance of the Voyager air transport and air-to-air refuelling aircraft. The service is run by AirTanker, a company involved in the project for around a decade. Aircraft were delivered ahead of time and deployed to Afghanistan within four months, enabling the ageing TriStar aircraft to go out of service on time.



n 'emphatic' endorsement from a former head of the British Army helped DE&S' Scout Specialist Vehicle team to top spot in the annual acquisition awards handed out by the Minister for Defence Equipment, Support and Technology.

General Sir Peter Wall was featured in a video presentation at the ceremony in which he praised the work of the team which is procuring nearly 600 protected Scout vehicles for the Army in a £3.5 billion contract over the next decade.

"I send them my strongest

congratulations - and that's from the whole Army," said Sir Peter, who retired as Chief of the General Staff soon after the Scout contract signing was unveiled to the world last autumn.

■ continued on page 30

#### **Engineering Skills Development team** (team leader Duncan Kemp):

The team is responsible for recruitment, education and management of DE&S' technical apprentices and graduates, deploying them across the business to develop their skills and knowledge. The team introduced regular communication and involvement from senior DE&S staff. The team ensured a 160 per cent increase in apprentices and 250 per cent in graduates. 60 trainees were introduced two years ago with 170 last year; this year the target is around 200.

#### **Operational Support Vehicles** Programme Operation Anguine (team leader Danny Fulford):

Secure transportation of munitions is critical to delivery of military output, particularly at a time of heightened interest from criminals and terrorists. The team developed a new capability for secure trailers fitted with vehicle tracking technology and extra security which reduce the risks from carriage of ammunition throughout the UK and Europe.

#### Protected Mobility team (team leader Phil Tulitt):

The team simultaneously staffed seven business cases with tight approval and affordability targets which enabled delivery of 2,000 protected mobility urgent operational requirement vehicles into the core equipment programme to support operations and future contingencies.



#### ■ continued from page 29

Team leader Roddy Malone accepted the award from Philip Dunne at the end of the ceremony held in Main Building on 27th January.

The annual awards – this was the 12th year of the event – reward the best procurement projects across the whole military spectrum.

Mr Dunne said: "This is the third time I have had the pleasure of being able to

present these awards. I feel very confident standing before you today, particularly because I have had more involvement in some of the projects this time, and therefore an understanding of what goes on in them.

"The MOD is a fantastic organisation, a better one than four years ago, and I hope you will share with me much of the improvement we have brought into defence through transformation which has delivered better equipment, in better

nick, in better time and much more on cost. That is a tribute to everyone in this room."

Mr Dunne added that the special award often went to projects recognised for their outstanding support to operations, often urgent operational requirements to get vitally needed equipment to the front line quickly. This year the thoroughly deserved award went to a different type of project altogether.

Eight projects were rewarded by the

# Scout Specialist Vehicle Programme team: (team leader Roddy Malone):

The team's objective was the delivery of the £3.5 billion Scout Specialist Vehicle Programme for 589 highly deployable armoured fighting vehicles which will provide the backbone of the Army's ground-based ISTAR capability in the future. £600 million was saved on acquisition, enabling extra vehicles to be ordered

# Nuclear Propulsion Tortworth team (team leader Commodore John Corderoy):

The team solved a difficult engineering dilemma through which they piloted the UK's nuclear deterrent submarine fleet and delivered a clear decision on the way ahead concerning refuelling of HMS Vanguard.





Minister, while three others received recognition for special achievements. Mr Dunne praised the Single Source Pricing Review team for rewriting the rules on single source procurement. Baroness Judith Jolly, who had worked closely with the team and was present at the event, was praised for her work in piloting Defence Reform through the House of Lords.

Mr Dunne also praised the Project Claustrum team for its groundbreaking work in outsourcing basic manufacture and repair of equipment to UK prisons. And he singled out the work of the Materiel Strategy team over the last two years to establish DE&S in its new format as a bespoke trading entity.

Each team was photographed with the Minister and their awards, while details of the projects and the team's major individuals were contained in a series of video interviews, conducted over three months by David Tucker,

photographer and multimedia officer with DE&S Communications. Mr Tucker was thanked for his important contribution by the event's Master of Ceremonies Paul Hamilton, the MOD's Head of Industrial

After the ceremony a reception for winners was held in the Memorial Courtyard.

#### **Recognition of Achievement Awards:**

#### Single Source Pricing Review team (team leader Jason Petch):

The team was responsible for overhauling the Single Source Pricing system - around 40 per cent of equipment by volume is not put out to competition - which had been unchanged since its introduction in the 1960s and had been historically built in industry's favour. The review has redefined the way the MOD buys high value core capabilities. These changes will potentially save hundreds of millions of pounds for reinvestment in the Armed Forces.

#### Operational Infrastructure Programme Project Claustrum (team leader Neil Terrill):

This is a joint initiative with the Ministry of Justice to outsource basic manufacture and repair work to the prison community, saving the MOD money – there is a 25 per cent saving on industry prices - and supporting the Government's commitment to break the cycle of crime and reoffending. The project answers a call from Prime Minister David Cameron to help build a work ethic among prisoners.

#### Materiel Strategy team (team leader Stephen Palmer):

The temporary team has been responsible for delivery of one of the most complex change programmes in Government to allow DE&S to better deliver its outputs to the front line. The team has developed different operating methods for DE&S, giving it a different organisational construct, and securing private sector skills.



# **Pride of Bristol**

The RAF has honoured the contribution of the city of Bristol – DE&S and industry – by naming its first A400M Atlas transport aircraft after the west country industrial hub

E&S has joined forces with the RAF and Airbus to honour the city of Bristol and celebrate the latest uplift in the UK's air transport capability.

The first A400M Atlas, delivered last November, made a spectacular fly-past over the former Filton airfield to mark the aircraft being named *City of Bristol*, believed to be the first front line aircraft specifically named by the RAF for 40 years.

Dozens of members of the media were joined by hundreds of Airbus staff to see the 9th February fly-past.

Naming of the aircraft is seen as a great honour for Bristol, where much

of the work on the aircraft takes place. It reinforces the city's status as a hub for aviation skills with the south west claiming the largest cluster of aerospace companies in the UK.

Engineering, design and manufacture of the wings employs around 450 at Airbus in Filton while the programme has created or secured work for around 900 people at companies based in the area.

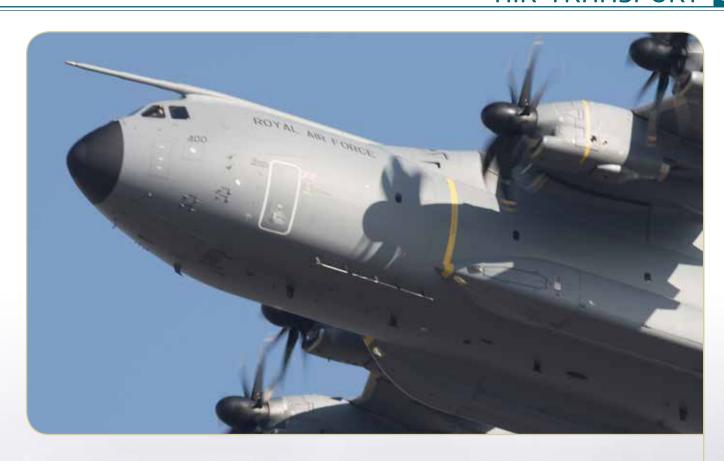
As well as the wings, design of fuel systems and landing gear has also taken place in the west. Other employers include Rolls-Royce, which is responsible for substantial work on the aircraft's TP400 engine while GKN Aerospace

makes the complex metal and carbon fibre composite structures for the A400M.

Bernard Gray, Chief of Defence Materiel, underlined how vital relationships were between DE&S, industry and the military customers in such a complex programme.







"In just a three-mile radius within Bristol those working relationships have brought together DE&S, Airbus, GKN Aerospace, Rolls-Royce and Atkins. They have drawn on specialist skills, expertise and products which, when combined, can deliver excellent results," he said.

"This programme will reinforce the standing of the UK at the leading edge of aerospace across the civil and military sector but specifically for those companies here in the region where we all work."

Mr Gray thanked Philip Dunne, Minister for Defence Equipment, Support and Technology for his support to the programme, the work of the DE&S A400M team and industrial partners for ensuring the programme was delivering.

Mr Gray and Mr Dunne were joined at the naming ceremony by DE&S' Chief of Materiel (Air), Air Marshal Simon Bollom. "The naming of the RAF's first A400M as City of Bristol reflects a continuation of historical ties between Bristol and the RAF," said the Air Marshal

"Bristol is at the heart of the UK aerospace community which has progressed through time and industry from the Bristol-built engines like Jupiter, the most successful aero engine of the 1920s, to famous jets such as Concorde."

Manufactured by Airbus Defence and Space the A400M will replace the existing fleet of C-130 Hercules. The UK, which will accept the first seven aircraft of 22 ordered by the end of this year, is one of four nations operating the aircraft, the others being France, Germany and Turkey.

All 22 UK aircraft are expected to be delivered to the main operating base at RAF Brize Norton by the end of 2018.



# Warrior and Scout: progress in tandem

Two of DE&S' biggest Land Equipment programmes are heading towards a crucial hurdle. Progress so far has been good but there is much work to do, says the head of DE&S' Armoured Vehicle Programmes

The head of Armoured Vehicle Programmes at DE&S has said he is satisfied with progress of Scout Specialist Vehicle and Warrior Capability Sustainment as the two vital programmes for the British Army reach a crucial stage.

Both vehicles head for their critical design review this spring where the maturity of each design will be tested and the technical effort assessed.



"Today we have seen some really good examples of the progress that has been made on each programme," said Maj-Gen Robert Talbot-Rice at a stakeholders' day hosted by Lockheed Martin UK at its Ampthill, Bedfordshire facility last month.

"Live firing trials which took place successfully last year are critical to the success of the programme and I'm pleased that Lockheed Martin now really understands the cannon system.

"I'm also pleased with work done to derisk the programme, although there will be some hard yards to travel this year to get through the critical design reviews. This is not something trivial; I don't underestimate the amount of work that will have to be done."

Maj-Gen Talbot-Rice and his Abbey Wood teams are responsible for in-service support for all of UK core armour and artillery systems, and also for managing procurement of new capabilities including Warrior and Scout. Teams' spending exceeds £550 million a year. The two programmes are running side by side, Scout to give the British Army a new, advanced, deployable family of medium armour front line vehicles, the 'eyes and ears' of battlefield commanders; and Warrior, an updated version of the highly-regarded infantry fighting vehicle of the last two decades.

Nearly 600 Scout vehicles will be built by General Dynamics UK, with turrets provided by Lockheed Martin UK.

Warrior's upgrade incorporates a turret which will have much in common with the "bigger brother" on Scout, giving both vehicles an impressive array of firepower.

"Commonality between these two projects is really important to us," said Maj-Gen Talbot-Rice. "The fact that Lockheed Martin will be building both turrets is of great benefit. Sights and gun control mechanisms are also common. And we are sharing the knowledge gleaned from live firing between

both projects. We refer to it as 'pay once, use twice'."

Both programmes went through competitive assessment phases, followed by challenging demonstration phases. DE&S has a contract with LMUK for 12 prototype Warriors with an expectation of buying 380 vehicles when the final investment decision is made.

The Warrior programme, described by Brigadier Ian Gibb, the Army's Director Combat, as the Army's next equipment priority is about improving the fightability and lethality of the vehicle with a new turret and architecture to support it.

While the vehicle will retain its powertrain, much of the existing infrastructure will be improved, including fitting the new turret with its ultra-modern CT40 weapon system, an updated environmental control system to improve crew comfort, better all-round awareness cameras and driver's night vision, along with a modular protection system to the chassis to enable quick change of armour for specific threats.

Trials to test fire the cannon on the move are imminent.

Seven prototype Scout vehicles are under contract with GDUK in its demonstration phase, set to be delivered for live firing tests next year. Long lead items for manufacture are already being bought while the manufacture contract was signed last autumn for 589 vehicles in six variants meeting nine specific roles. The £3.5 billion contract includes the supporting training systems. An inservice date is pencilled in for 2020.

Stakeholders on both programmes – from those supply chain companies likely to be involved in production to senior officers from the Army – were given a close-up look last month at the multi-million dollar investment LMUK has made at Ampthill in Bedfordshire. This includes new buildings and manufacturing plant.

Alan Lines, Vice President and Managing Director of Lockheed Martin UK's Ampthill site said: "There is a tremendous amount of work taking place at Ampthill to deliver the Army's future capability. From state of the art vehicle turrets to high tech battlefield management systems and weapons, our staff are playing a key role in providing the lifesaving equipment that will be used by soldiers on the frontline for years to come.

"We are continuing to invest millions of pounds into our site to make sure we have the right infrastructure and highly skilled workforce to deliver these vitally important programmes."





# Kit moves on

The Survivability team in Soldier Training and Special Programmes at DE&S has signed a contract for Virtus, a new personal protection and load carriage system, providing significantly improved capability for UK soldiers. Robin Clegg reports

fter an intensive assessment phase of almost two years, DE&S has committed to buy 9,000 Virtus systems in a contract worth an initial £14.69 million. High readiness Air Assault and Commando Brigades will be the first units to be provided with the new kit in the coming months.

The complete system is made up of a scalable body armour vest, helmet, and face protection, including ballistic glasses, ballistic goggles and a visor.

There is also a 40L and 45L daysack, a 90L rucksack, pelvic protection, webbing and pouches, knee pads, extremity protection (arm and collar) and a hydration system.

Because of the dedicated work of the STSP team at Abbey Wood, the new equipment also provides better value for money for taxpayers than the current in-service equipment.

Major General Paul Jaques,
Director Land Equipment at
DE&S, said: "DE&S is committed
to supporting the Armed Forces
by providing them with a high
standard of equipment and this
new personal protection and
load carriage system meets
that requirement.

"In challenging troop trials we found it performed exceptionally well and was a step change improvement on the in-service equipment. Key is the integrated nature of the system that enables the soldier to operate far more effectively."

The new system helps close existing capability gaps relating to the ability of troops to change the level of protection they wear

dependent on the threat. The new system is integrated which will improve the wearer's ability to perform the full range of military tasks. There is also a quick release mechanism, providing the wearer with the ability to remove the body armour vest quickly allowing escape from water and confined spaces, as well as enabling medical personnel easy access to the body should

the wearer require emergency treatment.

In extensive user trialling, managed by the Infantry Trials and Development Unit, the system performed significantly better than the other bidding systems and the current in-service equipment.

It was found to be more comfortable, better integrated both as a system and with other items of military equipment and, importantly, lighter than the other systems tested.

The new kit was put through its paces in a series of tests in a range of climatic conditions in the UK and abroad involving more than 200 members of the tri-service commands, monitored by the Defence Science and Technology Laboratory and the Institute of Naval Medicine.

The full range of trials took the team from a climate controlled setting at Boscombe Down to the searing heat of a derelict ammunition compound in Dhekelia, Cyprus. Timed mobility tests over obstacle courses and sensor-controlled biometric assessments also measured levels of stress placed on the body.

Armed Forces involved in the trials were constantly monitored and completed questionnaires on all aspects of the kit's performance and usability after each stage of the five-month process. Overall, after a thorough and wide ranging set of technical tests and trials the Virtus system performed consistently better than the current system and its three competitors.

Major Chris Dadd, DE&S STSP, who co-ordinated the series of trials, said: "We wanted to replicate the whole range of military conditions that a soldier would be exposed to in order to gain the maximum amount of information, using all available technologies.

"Throughout the series of tests, in a myriad of conditions, Virtus was the best system by a long way. It performed exceptionally well when kit integration and all the human factors were taken into account. In the end, you need the right kit to do the job properly and this absolutely enables us to do just that."



# **Democracy in action!**

DE&S' Submarine Dismantling Project has just completed a series of public consultation events across the UK on five possible sites to store radioactive waste from the submarines. Hundreds of views will now help form the next stage of the process

The Submarine Dismantling Programme – delivering a safe, secure and environmentally responsible solution for dismantling 27 defuelled Royal Navy submarines, 19 of which are berthed at Rosyth and Devonport – has passed its latest milestone, gathering the views of the public.

Most of the material in the submarines can be recycled, or sent for hazardous waste disposal. But until the Government's underground Geological Disposal Facility is available some time after 2040, an interim storage site is needed for submarines' steel Reactor Pressure Vessels (RPVs) which are considered to be intermediate level radioactive waste. Hence the need to ask for wider views.

Public consultation will help the MOD decide which of five shortlisted

sites – Atomic Weapons Establishment sites at Aldermaston and Burghfield in Berkshire; Capenhurst in Cheshire; Sellafield in Cumbria and Chapelcross on the Scottish border – should be chosen to store the RPVs. The consultation findings will be published in June and the proposed site will be announced next year.

Engaging in this kind of extensive consultation is unusual for the MOD, but John Davis, SDP's Programme Manager, said: "The benefit gained in demonstrating openness and transparency in order to gain public trust and confidence far outweighs the effort and resource involved, while at the same time de-risking project progress."

The events, held around each of the shortlisted sites, were supported by exhibition boards with documents for the public to take away. Two or three

workshops were held during each event, each with a presentation, followed by discussion. Workshops were well attended with interesting, and sometimes vigorous, debates.

Mr Davis praised the hard work and commitment of team members, some of whom travelled up to 4,000 miles across 19 events, in village halls and community centres around each of the sites.

He said, "I owe an awful lot to a fantastic team who were so committed through long hours, many miles on the road without complaint and total commitment."

He explained the hard work began long before the events started, preparing an extensive documentation suite and exhibition boards, booking venues and newspaper ads, seeking ministerial approvals and arranging delivery of thousands of newsletters to local



communities. David Collier, the team's public consultation expert, said: "There was great camaraderie and shared purpose developed over the three months on the road. There were many long days but we had some good times together."

Mr Collier believes the consultation was a great success. "I've worked on dozens of nuclear-related consultations over the years but this was as technically good and as successful as any and I am genuinely proud to have been part of it," he said.

"I hope it gives people living near MOD sites confidence that we do understand and value stakeholder engagement and that we can do it as well as the civil nuclear industry."

Analysis of the findings will play a significant part in assessment of the five sites. SDP will also continue to maintain the stakeholder relationships built during the public consultation.

The team hopes lessons learned from their experiences on the road will help other parts of the MOD and Government in understanding what can be gained from an open and transparent engagement with the public.

The final word went to a member of the public, who attended three full days of an exhibition, giving the team a hard time and putting forward his sceptical point of view to all other exhibition attendees. As he left, he said: "This is great; this how democracy is supposed to work, isn't it?"

Decommissioned nuclear submarines at Rosyth, left, while, above in happier times, the Royal Navy's first nuclear powered submarine HMS Dreadnought is pictured alongside support ship HMS

Maidstone

SDP project team who staffed events: John Davis (Programme Manager), Linda Eadie, David Collier, Lucy Samuel, Mark Ball, Chris Hargraves, Nick Brown, Kay O'Brien, Geoff Pollard, Rebecca Winston, Stuart Fowell, Tom Baldwin In-Service Submarines staff: Stuart Patton, David Wilcox, Mark Sanderson (all Defence Infrastructure Organisation), Christine Bruce (Rosyth), Nigel Parsons (Devonport), Lt Cdr Stewart MacDougall, Lt Cdr Iain Roberts, Lt Cdr Kevin Hood, Lt Cdr Chris Hodge, WO Mick Coles, WO Gary Barlow. Instinctif Partners (business communications consultancy): Harry Hudson, Lizzie McCann, Chris Brown, Suzanne Ellis, Rebecca Wallin, Gina Coleman, Clare Stafford.

DE&S' HEAD of Maritime Combat Systems has launched an initiative to involve industry in the future development of Royal Navy mission and combat systems.

Steve Hyde was attending the Royal Navy's Maritime Capability Industry day where, in the presence of the First Sea Lord, Admiral Sir George Zambellas, and industry representatives he set out his vision of how the MOD will work with industry to create a sustainable enterprise capable of delivering world class equipment to the Royal Navy.

By establishing a unique and recognisable maritime mission systems identity, the aim is to attract the best new talent into this high tech and complex area.

The Maritime
Mission Systems
(MMS) Industry
Engagement Strategy
(IES) prompted the
launch of an MMS
branding campaign.

Together they seek to provide an unparalleled opportunity for industrial partners to assist in shaping the future of Maritime Combat and Mission Systems acquisition and support.

This campaign includes a planned Maritime Mission Systems Engagement Centre at DSEI 15, led by the MCS team and supported by the Royal Navy and industry.

Sir George stressed that the Royal Navy was "not interested in coming second" and that within an affordable programme, innovation and technology must play a vital role in order to optimise the efficiency, credibility and battle-winning edge of the navy.

Mr Hyde said:
"The Maritime Mission
System Industry
Engagement Strategy
is a ground-breaking
initiative. It aims to
give industry the
opportunity to work
with MOD to shape
a brighter future for
the UK Mission and
Combat Systems
enterprise.

"I'm really looking forward to leading the enterprise in tackling the exciting challenges ahead."



Navy systems heading for a collaborative future



## form up under Brunel name

DE&S' principal engineers are presented with their Brunel Club badges by Air Vice-Marshal Julian Young and Muir Macdonald, head of BMT

THE PROFESSIONAL Engineers Forum at the end of January saw the launch of the Abbey Wood Brunel Club.

The club is aimed at professionally registered engineers in DE&S, who have recorded their registration on HRMS

All club members receive an exclusive badge. Forthcoming events have been aligned to

historic Brunel dates to mark the legacy of the famous engineer.

To mark the occasion Muir Macdonald, managing director of BMT Defence Services, presented badges to the principal engineers. This provided the perfect opportunity to join together in continuing professionalisation of the DE&S engineering workforce.

The Professional Engineers

Marshal Julian Young and attracted 175 engineers and scientists from across DE&S.

Highlights included

Forum was hosted by Air Vice-

included presentation from the UK president of INCOSE (International Council Systems Engineering) on the practical application of systems engineering, and an update of the work to implement a defence authority for engineering, an overview of the latest developments which are taking place within INCOSE.

The next Professional Engineers Forum will be on Thursday, 29th July while the first Brunel Club event will be a breakfast briefing on 9th April in the annex area of Abbey Wood's Central Facilities Building.

☐ The latest Maritime Engineering Forum focused on the experiences of the graduate engineer community in DE&S with an overview of the experiences available to graduate scheme entrants and the work they had completed.

Presentations were introduced by the Maritime Training Partner and Head of Naval Authority Nick Overfield.

Importance of varied and practical experience for those colleagues entering the scheme who are both new to DE&S and possibly to maritime engineering was stressed.

Presentations covered industrial shipbuilding in South Korea, a foreign waters military exercise and the new engineering skills framework being developed in DE&S.

# Investing in tomorrow's engineers

ENGAGEMENT WITH primary schools is key to addressing the looming defence engineering skills challenge, according to Air Vice-Marshal Julian Young.

The issue was the subject of a Bristol Primary School STEM Conference held last month and co-hosted by Atkins.

Air Vice-Marshal Young, pictured, said: "DE&S faces a real demographic problem, with a generation of knowledge and experienced engineers soon set to retire and insufficient successors.

"We therefore need to secure a new, long-term pipeline of home-grown talent to address this skills gap. Promoting STEM – science, technology, engineering and maths – in schools from as young an age as possible will help to create that muchneeded talent pool.

"Recent evidence suggests that enthusing teenagers towards STEM courses might be too late, and thus to promote engineering in younger minds will prove successful in the long term. Plus, it allows companies within the same sector to collaborate freely in such an enterprise as there is no meaningful competition for employment at this age."

Attendees at the conference included representatives from MOD, companies such as Airbus, Atkins, Babcock, BAE Systems, Boeing, General Dynamics, MBDA, Rolls-Royce, Selex and Thales, and academic bodies such as the University of Bristol and UWE.

The objective was to share the STEM promotion activity undertaken across various sectors and academia, to consider how that might be improved and to look at increasing STEM outreach in local primary schools.

Charles Critchett, director of Atkins' defence business, explained: "Like many of the attendees, while Atkins has an established of STEM programme engagement activity in Bristol, this has historically focussed on secondary schools.

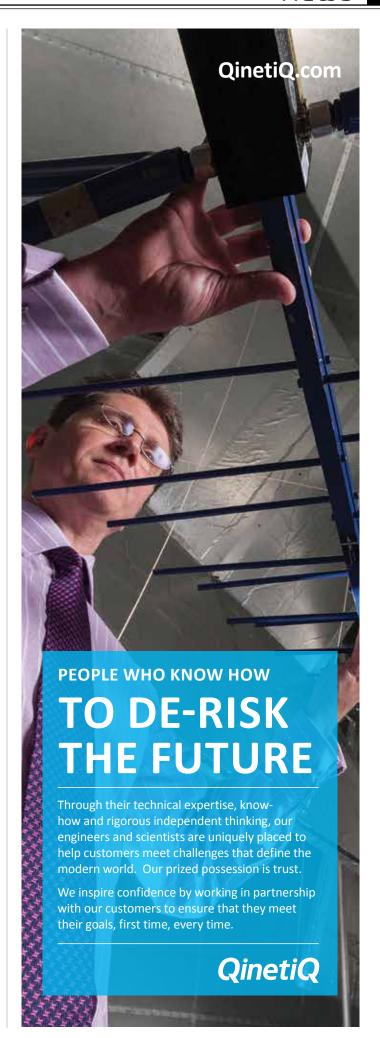
"As became clear



throughout the conference, more now needs to be done to engage with children at a younger age so that they might seriously consider a career in engineering or science."

Air Vice-Marshal Young added: "Children aged seven to nine also appear to be 'gender blind' when it comes to considering subjects or careers, which might help create more diversity within Bristol has engineering. a long and proud history of engineering excellence including Brunel, Concorde, Bloodhound SSC, and when that talent is underpinned by a vibrant and inclusive STEM community, the city could ultimately become the engineering hub of the UK."

Attendees agreed to develop a common message to primary school students for future STEM activities. A map is also being created to identify which Bristol primary schools currently receive STEM support, so activity can be better co-ordinated and gaps addressed. The attendees also committed to a follow-up event in three months' time.





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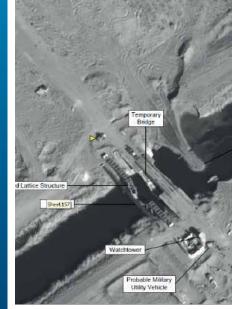
Intelligence Analysts (Imagery) analyse aerial imagery obtained from reconnaissance aircraft and other sensors. 'IAs' typically work in small teams and are an essential part of a successful mission.

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## Understanding Trident through a high speed image

The Atomic Weapons Establishment, administered by a DE&S-managed contract, is leading the way in modern techniques

THE ATOMIC Weapons Establishment plays a crucial role in national defence by providing and maintaining warheads for Trident, the UK's nuclear deterrent.

AWE has been at the forefront of the UK nuclear deterrence programme for more than 60 years providing innovative solutions to national nuclear security issues.

From its beginning in the early 1950s, AWE has been at the forefront in producing high-speed imaging techniques.

High-speed imaging is vital to understanding the performance, reliability and characteristics of a nuclear warhead and this became increasingly important following the UK's ratification of the Comprehensive Test Ban Treaty in April 1998, which meant that data could no longer be collected from nuclear tests.

To capture the early stages of a nuclear burst, AWE developed its own ultra-high speed cameras and helped in the development of high-speed cameras with a number of manufacturers.

Right up to the early 21st century, 16mm-film cameras were used – filming experiments at speeds of 10,000 frames per second – mainly at the purpose-built range at Foulness.

Today, AWE's scientists, engineers, metallurgists and hydrodynamicists, collaborate with other specialists in the area such as the Institute of Shock Physics (ISP) at Imperial College London, and rely on high-speed imaging to enhance understanding of the Trident warhead. Imperial College is

one of five strategic alliances that AWE has with UK universities.

Expanding cylinder experiments, for example, allow investigations into dynamic failure and damage mechanisms at the high strain rates that can occur within different sheet metals, such as stainless steel.

Experiments are conducted on the large bore gas-gun at the ISP, in which a gas is used to launch projectiles at velocities in excess of 1 km/s. High-speed imaging gives the capability to record the temporal history of fracture activation in these experiments, the results of which support the ability to predict behaviour of fragmenting systems.

A variety of high-speed cameras are in use at remote locations across the UK where conventional explosive trials are conducted. With cameras operating at speeds of up to one million frames per second, the demand to effectively light such events is also crucial for obtaining useful images.

With the continuing improvements in digital technology, high-speed imaging techniques are increasingly being used in other areas such as TV and cinema, in particular in sports broadcasting – examples of which are Formula One, horseracing and the Olympics.

The small team at AWE are experts in all high-speed imaging techniques. The company has a dedicated inhouse capability to support the UK deterrent programme, underpinned by world-leading science, engineering and technology.



#### Subs in space – sharing the experience

STAFF FROM the MOD joined Nasa Chief Toxicologist Dr Valerie Meyers as she hosted a technical exchange meeting of atmosphere control experts at Johnson Space Centre in Houston.

Subs in Space – the title for the threeday event – denotes the common task across the submarine and space station to provide a safe, breathable atmosphere in a vessel in an environment which does not support human life.

The UK party consisted of Phil Brocks, (Naval Authority, Fire) Tina Goodall (Naval Authority, Submarine Materials Toxicology), Chris Clark (Naval Authority, Submarine Safety), Lt Mark Leadbeater, (MET RA, Submarine Atmosphere EPM) and Steve Moore (Institute of Naval Medicine Toxicology). Dr Hilary Bollan (Naval Authority

Submarine Atmosphere Control) joined the meeting by phone.

Sessions covered all aspects of atmosphere management in a sealed environment with Nasa providing formal and informal presentations from more than 20 of their team working in the field.

One highlight of the meeting was a visit from astronaut Steve Bowen, a former submariner. His first impression of the atmosphere in the International Space Station was that it was like going back on board a submarine.

One outcome is the early exposure of new technologies being developed for deep space travel life support. The UK has offered Nasa the opportunity to trial some of its instruments in development on a Royal Navy submarine to give them exposure to a real sealed atmosphere.



Above: international members in Texas with some of their Nasa hosts



# Inventory moves inspire latest class of learning

#### Staff learn more lessons of successful management

BERNARD GRAY, Chief of Defence Materiel, has urged staff to 'take the future into your own hands' as he launched a Masterclass programme to inspire best practice around DE&S.

The monthly Masterclasses are hosted by CDM and senior leaders as they look to accelerate learning in DE&S.

The programme began with an insight into how staff helped to reduce DE&S' inventory by several billion pounds and revolutionised the inventory management process.

Those attending the January class heard how the Inventory Management Operating Centre has reduced the DE&S assets from £40 billion to a more manageable £32 billion.

DE&S inventory covers equipment from clothing to spare engines and missiles – everything to ensure UK troops are fully equipped for operations.

During the class, achievements were recognised by CDM who told inventory management staff: "You have saved the taxpayers of this country a huge amount of money on equipment that otherwise would be sat collecting dust in a shed."

Transformation of Inventory Management had intervened in old processes while project teams across DE&S and the Front Line Commands worked with Ernst and Young to ensure reductions in stock and annual spending.

Andrew Cannon-Brookes, Director of Inventory Management, said: "Most importantly, we were able to mitigate potential impacts of supply to the Armed Forces and ensure good supplier relations were maintained.

"The transformation programme is continuing to drive change and has more work to do."

Staff also gained insights into new tools that are being developed, such as the ammunition calculator that is helping to ensure accurate forecasting and spending.

TWO ICONIC Fairey Swordfish bi-planes are to benefit from an Armed Forces fund.

The £35 million Armed Forces Covenant Libor Fund was set up from fines levied on banks for manipulating the London Interbank Offered Rate (LIBOR) financial benchmark.

The Yeovilton-based Fly Navy Heritage Trust expects to receive £500,000 to fund essential repairs and build a contingency of spares to keep the aircraft flying at air shows around the country.

Built in the early 1940s, Swordfish Mk 1 W5856 and Swordfish Mk 2 LS326 are the only airworthy Swordfish in the world and are of the greatest historical significance to the Royal Navy.

Rear Admiral Terry Loughran, Chairman of the Trust, welcomed the announcement. He said: "The Swordfish sits at the heart of the nation's naval aviation heritage and is the embodiment of the ethos, innovation and inspiration of naval flying.

"She is a priceless national treasure and this grant will make a real difference enabling us to provide a vital third Pegasus engine and all the spares needed to keep both aircraft flying for many years."

#### Cash award is set to keep iconic aircraft in the skies



# Apprentices – the awards just keep on coming

A DE&S apprentice has become the latest to walk away with a major award.

Stuart Redford, 28, based at Devonport, came up trumps at the EEF/Aldermore Future Manufacturing Awards where won the Outstanding Performance by a Final Year Apprentice Award, sponsored by JAM Recruitment.

Stuart, pictured, is a DE&S technician apprentice and beat off competition from six other shortlisted final year apprentices in the region including fellow DE&S apprentice Josh Beddis - after impressing judges with his dedication, determination and drive.

Judges said Stuart was 'highly focused and enthusiastic, prepared to go the extra mile to achieve his goals'.

He had been 'clever at learning from managers and other colleagues, tapping into their experience and expertise'. He will now go on to compete with other regional winners from across the UK for the national title at an awards gala dinner in London.

Stuart said: "I'm delighted to

have won this award, especially after being up against some other incredibly talented and dedicated apprentices.

"It has been an eye-opener,



and equally terrifying and inspiring to see the success and strength of the other shortlisted apprentices - as far as I'm

concerned, we're all winners.

"Now I'm just looking forward to the national finals and hope that I can carry away the UK title too. If I did it would be a great boost, not just to me but to all the amazing apprentices from the south west who are putting everything into their careers.

"I just hope that my success so far makes other local young people of all backgrounds think seriously about becoming an apprentice too."

of JAM John Morris. Recruitment, added: "This award was justly deserved. Stuart was up against some really strong contenders so it's a great achievement and testament to his hard work and dedication that he

"Apprentices have a vital role to play in the future of engineering and manufacturing and in the wider British economy. It's great to see Stuart's efforts being recognised and I wish him the best of luck in the national finals."

Hannah Stanbury, apprentice with Defence Gosport, Munitions was shortlisted in the south east regional final.

#### Staff look at future careers

PERSONAL AND professional development opportunities have gone on show to staff at Devonport.

More than 400 military and civilian staff attended stands with 35 local and national training providers showcasing learning opportunities with colleges and universities offering courses, ranging from NVQs and GCSEs through to post-graduate studies.

Civil Service Learning and Defence Academy organisations joined specialist IT and project management training providers. Military staff nearing the end of their service career were also well catered for.

Opportunities were offered for those seeking promotion or advancement. professional development and interests and hobbies.

# Awards help personnel soldier on

THE LATEST awards to recognise inspirational deeds of the Armed Forces community take place next month.

The Soldiering
On awards recognise
individuals or
teams who, through
outstanding
achievements, have
overcome injury or
loss and transformed
lives in ways they could
never have imagined.

The awards, the idea of Wg Cdr Tal Lambert of the Networks team at Information Systems and Services, began in 2011

The success of that event led Wg Cdr Lambert, with the support of others, to establish the Soldiering On Through Life Trust, a not-forprofit organisation to support injured service personnel and their families throughout their lives by giving recognition of inspirational and outstanding achievement through an annual awards ceremony, The Soldiering On Awards. "The Soldiering

"The Soldiering
On Awards enable us
to publicly repay a
great debt of gratitude
to servicemen and
women, their families
and those who support
them," said Defence
Minister Lord Astor of
Hever, who has since
become the charity's
patron.

"They also keep front of mind the strong bond between the services and civilian life as well as how we can learn from each other as we continue to work together for many years to come for the good of society as a whole."

For the 2015 awards, nominations were received from dozens of charities from across the military charity sector. Award winners will be recognised at the fifth ceremony which will take place on Saturday, 18th April at the Park Plaza Westminster in London

# Royal advice and a curry inspires Arthur's arrival

#### Duke has a word for Yeovilton couple's first child who's late on parade

YEOVILTON FOUND itself in the national spotlight recently – and not just for the visit of the Duke of York to award pilots their Wings at the station's final Lynx and Sea King parade.

During presentations Prince Andrew chatted to Judy Lofthouse, wife of Lt Tom Lofthouse, about the long overdue arrival of their first child.

Following the excitement of his dad's award and advice from the prince that a curry might speed things along, baby Arthur popped into the world a few hours later.

Lt Lofthouse had not anticipated Judy being at his Wings Parade as he qualified as a Sea King pilot. Nor the Royal advice.

Judy said: "Two weeks before the parade we were told the birth was imminent, and four days before, I was informed that I was technically in established labour albeit without feeling any contractions. So it was becoming more likely we were not going to make it to the ceremony.

"Astonishingly, not only did we get to attend but our son was born later that night, following advice from the Duke of York to have a curry – which we did. I feel so incredibly lucky and immensely proud. It was without doubt the best day of my life."

New pilot and new dad Lt Lofthouse said: "Flying training has taken five years of countless exams and around 350 assessed flying hours.

"The arrival of our son on the same day as being awarded my Wings made for an absolutely perfect day. The Duke advised my wife to have a curry, which we did that evening, and it seemed to do the trick, so we couldn't resist adding Andrew as a middle name."

Arthur Thomas Andrew Lofthouse was born at Yeovil District Hospital, weighing 8lb 5oz.



Arthur Thomas Andrew Lofthouse, pictured with proud parents Tom and Judy, while, above, Lt Lofthouse receives his Wings in his presentation from the Duke of York

MASTER ORIENTEERER Geoff Ellis of the BATCIS Falcon team opened his account for 2015 in emphatic style at the Southern Orienteering Championships weekend.

The main race, the championships' Classic Race, took place at Sheepleas, near Guildford, with a forest sprint race the day before near Dorking. They formed races 1 and 2 in the UK Orienteering League.

Geoff won the league for the last five years in the male 35-39 category before moving up to M40 next

#### Geoff blasts off to a rear flyer

year, and moved to maximum league points in the

The Southern Championships was tougher, longer and more physical but Geoff was determined enough to become the Southern M35 orienteering champion for the fourth year running, securing another maximum score in the league for a tremendous start to the season.

#### Derek bows out - after 45 years

DEREK CHUBB, of Platform Management Systems in the Electrical Systems Group, is pictured as he retires after 45 years' service.

Derek's career started as an apprentice in Devonport followed by posts equipment support roles including reactor control and instrumentation within the Submarines team, the electronics section with Director Marine Engineering the lighting section.

Since taking up the PMS lead role in 1997 Derek became recognised as the expert in Platform Management Systems and the application of human factors to platform control, with recent SME support provided to the MARS tankers, Queen Elizabeth carriers, Type 26, Successor submarine and Astute Boat 4 projects.

Chief of Materiel (Fleet) at DE&S. Vice Admiral Simon Lister, thanked Derek on behalf of DE&S for the support given to the front line capability and to new build platforms during his lengthy period of support.



Admiral Simon Lister, right, bids Derek Chubb farewell from DE&S after his 45 years service to the MOD

Vice



☐ Roddy Malone, head of the successful Scout Specialist Vehicle programme, is the new head of Operational Support Programmes.

He replaces Brigadier Peter Rafferty, pictured left.

In other moves around DE&S Jon Geddes is the new head of Submarine Programmes on internal promotion. He has replaced Andrew Avison.

Huw Cable takes over as head of Land's Programme Management Office from Anthony Ashton who has moved across Government out of the MOD.

In Ships, Capt Ian Kennedy has moved from Fleet at Portsmouth to lead Maritime Equipment Transformation. He replaces Jonathan Gilchrist who moved last year to Commercially Support shipping.

#### MOTTO -THE MOD LOTTERY

Winners -December 2014

£10,000: Ashleigh Dickson (AFCO Belfast). £5,000: Janet McDougall (RAF Alconbury). £2,000: Catriona McBeath (RAF Linton on Ousel. £500: Tracy White (Whale Island), Sally Ewins (DMS Whittington). £100: Michael Smith (DMS Whittington), Stephen McConnell (RNAS Culdrose), William Bell (Shrivenham), Rajeshwari Rajawat (Southall), Julie Beggs (Lisburn), Adrian Smith (Abbey Wood), Kathy Barr (Sealand), Daniel Phillips (Abbey Wood), Faye Burnham (Abbey Wood), Adrian Nash (Whitehall), Steven Bland (Donnington), Richard Weeks (Blandford), Kevin Harris (Plymouth), Stuart Ross (Bacton), Dawn Harrison (Grantham), Bryan Evans (Dering Lines), Anne Riglar (Corsham), Paul Rolls (Bovington), Nerys Arling (Northallerton), Brenda Young (Arbroath).

## 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:

2015DIN04-022: this DIN provides information for MOD and DE&S teams on the factors to be considered when planning stakeholder days, industry days, bidders' conferences or industry de-briefings, collectively referred to as industry events, and the process for consultation, approval and advertising any industry event requirement.

2015DIN04-026: the operational requirement of the RAF pager system has diminished with introduction of modern mobile communication technology. Due to equipment obsolescence the systems have become unsupportable. This DIN declares the withdrawal of ADATS equipment support to legacy RAF pager systems.

2015DIN07-018: This provides advance notice of the programme and application form for all eligible engineer officers and warrant officers wishing to attend the Chief Naval Engineer Officer's Conference and Royal Navy Engineer Officers' dinner on 31st March and DE&S Maritime Engineering Conference on 1st April.

A DIN Index Search replaced the annual DIN indexes at the end of 2014. More information from the link below: http://pppaintranet.chris.r.mil.uk/business/dins/din index.php

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We're proud of the responsive approach we take to the Skynet services we deliver globally to the UK MoD. This involves a commitment to providing an integrated network that constantly adapts to meet changing needs across Land, Sea and Air. Watch this space for the exciting innovations being made to our global network capabilities later this year.

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