







Latest DE&S organisation chart See inside













The UK has formally accepted the first of the Joint Strike Fighters, to be known as Lightning II, at a ceremony attended by the Defence Secretary in Fort Worth, Texas

22 Hull and high water!

DE&S and industry have applied specialist knowledge to the underwater hull design of the new Queen Elizabeth class aircraft carriers

24 Atlas maps out air transport future

Atlas, officially named at the Royal International Air Tattoo, will join the RAF in two years' time to help bolster the UK military's future air transport force

Herrick heroes

Military Working Dogs provide valuable capability to British patrols on the front line. But procurement by DE&S begins many miles from Afghanistan

Satisfying defence demand

Defence Minister Peter Luff outlines progress, two years into his portfolio



#### cover image

The UK has accepted the first of its Joint Strike Fighters in a ceremony in the United States. Three aircraft are already on contract and Defence Secretary Philip Hammond has revealed that a fourth will be ordered next year.

#### desider

#### Assistant Head, Public Relations:

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

Deputy Editor:

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

Distribution Manager:

Dick Naughton - 9352 34342 or 0117 9134342 dessec-corp-busmgr1a@mod.uk

Advertising: Anthon Linton - Ten Alps Publishing, 1 New Oxford Street, High Holborn, London WC1A 1NU Tel: +44 (0)20 7657 1819.

Fax: +44 (0)207 7379 7155 anthon.linton@tenalps.com

#### Printing:



desider is distributed free of charge to DE&S employees and the equipment capability sponsor. Copies can also be made available to readers outside the MOD, including those in the defence industries. While the editor takes care to ensure all material produced is accurate, no liability can be accepted for errors or omissions. Views expressed in desider, and the products and services advertised, are not necessarily endorsed by DE&S or the MOD. All content for advertorials must be cleared by the relevant MOD project team before publication.

#### © Crown Copyright

This magazine is produced on Cocoon Silk 90gsm which contains 50 per cent recycled and de-inked pulp from post consumer waste and Forest Stewardship Council certified material from well-managed forests.



#### **NEWS**

5 A new DE&S - the countdown continues

The MOD is to focus on developing and testing the option of turning DE&S into a Government-Owned, Contractor-Operated body

7 New delivery of logistics gets green light

The first major moves in a programme to improve inventory management and stock control in DE&S have begun

8 Brown is the new black!

> Five different types of brown boots for Armed Forces personnel are set to replace black as the basic colour of UK Forces' footwear on the front line.

9 First Wildcats are handed over

> The Farnborough International Air Show saw the first two of a fleet of 62 Wildcat helicopters handed over to the MOD

13 Foxhound makes immediate impression

Foxhound, the UK's latest light protected patrol vehicle, has received the thumbs-up from those who are training on it in Camp Bastion

Comms in a great leap forward

A new Communications System Integration Facility has been opened by Thales UK, a milestone for the Queen Elizabeth carrier programme

DE&S staff mark base closure

RAF personnel and DE&S staff have marked the formal closure of RAF Stanbridge, home to the RAF Supply Central Control System for many years

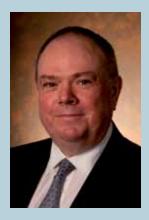
Reinforcing the safety message

Good safety leadership is about reinforcing simple messages and showing people you care, according to the Head of Logistic Services at DE&S

#### Bernard Gray

#### Chief of Defence Materiel

'Much of what is being studied is focused on ways of increasing skills at DE&S and on giving you increased freedoms to do your jobs to the best of your capabilities'



I was very pleased to be able to brief several hundred DE&S staff at Abbey Wood on some significant developments in The Materiel Strategy just before the House of Commons broke up for its summer recess in mid-July.

I also wrote to all DE&S staff on 17th July to explain that Secretary of State Philip Hammond announced in a statement to Parliament that the strategic case for DE&S to become a Government Owned Contractor Operated (GOCO) body was the stronger of two options under consideration.

Further value for money analysis is needed to confirm this assessment and make a formal decision between GOCO and the other option of an Executive Non-Departmental Public Body with a Strategic Partner (ENDPB/SP) from the private sector. Once that decision is made, we will be in a position to consult formally with Trades Unions and others.

But the work so far on the strategic case means that Ministers have agreed we should not spend further resources on developing the ENDPB/SP option, and instead focus on the GOCO over the summer.

Work is also under way on a Value for Money Benchmark (previously known as a public-sector comparator) which we term 'DE&S-Plus'. This option will look at further increasing the effectiveness of the existing operating model and improving the ability of the organisation to do its job more effectively.

Although GOCO is the option currently under study I want to emphasise that no final decision has been made on changing the status of DE&S and there are several steps along the road and much work to be done before Ministers will be in a position to

make a decision in 2014.

The Secretary of State's announcement on the next steps on the road for DE&S is very important for all of us, and comes after a year of in-depth analysis of the issues. The work to assess and develop the options for DE&S was and is, inevitably, very complex and demanding and must be allowed to take its course. You all know the scale of DE&S, its very large annual budget and the fact that it is responsible for a huge part of the MOD's activities, both in equipping and supporting our forces and working with defence industries worldwide to

We have devoted the time that is necessary to ensuring that The Materiel Strategy delivers the best possible analysis to support Ministers and get the best possible outcome for defence.

Ultimately, as I have said before, much of what is being studied is focused on ways of increasing skills at DE&S and on giving you increased freedoms to do your jobs to the best of your capabilities.

Your views continue to be important to the process of change. The Materiel Strategy team has put, and will continue to put, a lot of effort into engagement with everybody who works in DE&S during the coming months as we take forward the work announced by the Secretary of State. There will be an expansion of workforce focus groups and other working groups and a programme of engagement with the Trades Unions is under development.

The objective we are working towards is that DE&S will be a more capable and more self-confident organisation that will be better able to meet the future needs of the Armed Forces.

THE MOD is to focus its efforts on developing and testing the option of turning DE&S into a Government Owned, Contractor Operated (GOCO) body, after extensive studies showed this model had the best potential for the future management of the organisation, Chief of Defence Materiel Bernard Gray told hundreds of staff in a town hall session.

The work is a core part of the Transformation process under way in the MOD to reform acquisition to get better value from the defence budget.

Due to constraints on MOD's ability to pursue two options simultaneously, no further work is planned on a second option – an Executive Non-Departmental Public Body (ENDBP) along the lines of the organisation which built the venues for the London Olympics.

Mr Gray explained to staff at the event, held at DE&S' Abbey Wood headquarters, that there would be value for money work to validate the assessment that had been made.

Work would also be done to develop an alternative 'DE&S-Plus' option which would investigate increasing the effectiveness of the existing organisation within the MOD.

"We have not decided to pursue a

#### 'This is good for us. We will be allowed to get on with doing our jobs'

GOCO option because it has not yet passed the value for money test – let's be absolutely clear about that," he told staff. "What we are doing is parking one option and working up the other two."

Proposals for a GOCO organisation would be explored along with DE&S-Plus over the next few months to support a decision later in the year on whether to proceed with the GOCO option and whether to launch a competition for a private sector management company to run the organisation.

An investment appraisal would in due course test the GOCO option against a public sector comparator – DE&S-Plus – following which a final decision would be taken, he said.

He repeated his frustrations with current arrangements, pointing to one of a number of inflexibilities under which DE&S works. A military engineer, for example, he said, might retire on the Friday, but could not be hired on the Monday as a civilian.

"We have to run a competition, which would take six or nine months to do," he said. "In DE&S-Plus we would need to see what freedom from the rules of the Civil Service we might be allowed

# Countdown continues towards the new DE&S

to have to get on with our jobs while still being part of the MOD." He added that he had talked to Trades Unions, who had been very constructive in their approach to dealing with such inflexibilities. We have not decided to pursue GOCO yet as we have not yet passed the value for money test."

He said if the proposals passed that test there would be consultation with the workforce and Trades Unions.

"But the overall goal here is, how does DE&S get the freedom, the management, the skills it needs to do the job asked of it? Can we do that with the DE&S-Plus model, or do we use an outside model. That is the test we are trying to pass.

"We need to be equal partners with industry. This way we get more freedom to do our jobs, promote our people, increase our skills inside the organisation and make more people more capable with better job satisfaction.

"This is good for us. We will have a situation where, whatever happens, we will have more flexibility to do our jobs. People will be more empowered and will enjoy what they do. We will be allowed

to get on with doing our jobs. That's got to be good."



Mr Gray said he hoped the value for money exercise would be finished by September

or October which would be followed by further consultation with Trades Unions. Industry would be involved before the end of the year with ideas on what they could offer DE&S.

In concluding his comments, after taking questions from staff, Mr Gray played down people's fears of continuing uncertainty. "In a sense this is a non-announcement announcement. We are parking one option and working up the other two.

Lieutenant General David Capewell (on the left), Chief of Joint Operations, is welcomed to Abbey Wood by Major General Ian Copeland, Director Joint Support Chain. During his 17th July visit Lt Gen Capewell met Chief of Materiel (Land) Lt Gen Chris Deverell and visited the Defence Support Chain Operations and Movements facilities.



## Freedom of operation is future key – Minister

ARMED FORCES Minister Nick Harvey has explained that transformation of DE&S into an Executive Non-Departmental Public Body would not give it what it needs to succeed.

"The GOCO option has looked better in the early explorations because, if we stuck with an ENDPB, the workforce and the management would remain in the public sector, and the greatest possible private sector involvement would be the use of a consultant," he told Parliament on 17th July.

July.

"If we go for the GOCO option, the entity will have all the freedoms of a private sector operator: it will recruit people on private sector terms and conditions, and will have an incentive to make the thing work in a way that an ENDPB would not.

"Despite the good work of good people at DE&S, they do not have available to them the full range of skill sets that they need to negotiate on equal terms with some of the more complex providers.

Granting DE&S private sector freedoms will enable it to take on board the necessary skill sets to ensure that in future negotiations and project management there is a better match between those securing value for the taxpayer and good products for the Armed Forces and the private sector providers of complex programmes. That will be a marked improvement on how things have been in the past.

Mr Harvey added that smaller companies should benefit. "Since the move to the MOD contracting directly with prime contractors, which then handle subsidiary contracting, it would be true to say the MOD has rather lost the skill set of managing SMEs," he said.

"It is a common complaint of SMEs that they do badly out of prime contractors. If we rebuild the skills inside DE&S so it can manage the supply contracts from SMEs directly – in some instances – they will benefit. That is certainly what SMEs are telling us."

#### **Desider Industry Focus 2013**

We are delighted to offer you the opportunity to profile your business in the Defence Equipment and Support's reference guide to who's who in the UK Defence market.

The desider directory 2013 will be a smart US A4 industry reference point, and follows the launch of the industry focus in March 2012. Inserted free into the March 2013 issue of desider magazine and distributed at major industry events throughout 2013 such as DSEI.

The annual directory will be a high quality product, helping defence and procurement staff at the MOD and outside in industry to understand the service your organisation has to offer. The desider directory is a useful editorial guide, offering a greater profiling opportunity for brands who have no platform to do this anywhere in the market. Its industry and DE&S editorial make our offering a strong commercial proposition that carries a genuine 12-month shelf life.

The book will highlight your business with a strong profile, including images, your logo and contact details.





#### Readership profile

desider is the Ministry of Defence's Defence Equipment and Support magazine covering all aspects of defence equipment acquisition and support. Published by the Defence Equipment and Support organisation (DE&S), with a circulation of up to 20,000, desider reaches all defence acquisition and logistics support staff at DE&S, which has its headquarters in Bristol and operates at sites around the UK and overseas, including UK Naval Bases. It is also seen by the armed forces, at the front line and in the UK and Germany, together with senior civil servants in Whitehall and a broad sector of industry in the UK and overseas. desider offers a high level, high quality and powerful readership across the DE&S.

- Defence Equipment and Support 50%
- Defence Industry 29%
- MOD Whitehall 21%

Readers span all levels and functions

of the MOD, both civilian and military. The magazine's readers have responsibility for an annual procurement budget of over £13 billion, making them as an organisation the largest single purchaser of manufactured goods in the UK today.

#### **Key facts**

Format: American A4 Pagination: 56-pages Circulation: 20,000

Key dates

**Booking deadline:** Monday

3rd December 2012 **Copy deadline:** Monday
10th December 2012

Publication date: March 2013

#### **Advertising Options**

- Double page spread profile (single page editorial alongside single page advertisement)
- Inside front cover DPS (only one available)\*
- Outside back cover (only one available)\*





To reserve your space please call

#### **Anthon Linton**

Account Manager T: 020 7657 1819 E: anthon.linton@tenalps.com

Ten Alps, One New Oxford Street High Holborn, WC1A 1NU

## Starting gun fired on new delivery of logistics

THE FIRST major moves in a programme to improve inventory management and stock control in DE&S have begun.

Announcement of the Assessment Phase for the Logistic Commodities and Services Transformation (LCS(T)) project is the first stage in positioning the logistic and commodities functions of DE&S into the wider Defence Transformation Programme.

Assessment will look at options for future provision of logistic services and commodity products to defence, ensuring that the support provided to UK Forces is properly structured, more streamlined, joined up, flexible and able to deliver a modern service.

Peter Luff, Minister for Defence Equipment, Support and Technology, made the announcement on 16th July.

He said: "Transformation aims to consider how we can improve inventory management and stock control, rationalise current stock holdings, improve and rationalise storage

rationalise storage infrastructure (releasing surplus for disposal). improve commodity procurement and logistic processes, and optimise the size of LCS the

organisation.

"Under the current model, each commodity area operates in isolation. The storage infrastructure itself requires investment to improve its condition and to rationalise the



Defence Minister Peter Luff, right, on a visit to Donnington, with Commodore Paul Cunningham, Head of Logistic Services, and Andrea Dodwell, Warehouse Support Manager

numerous dispersed locations."

LCS undertakes procurement and inventory management of all non-explosive commodity items, including food, clothing, fuel, and medical supplies.

Mr Luff added: "Work will explore two options for delivering support; industry integration (where industry would manage and deliver the services required) and an in-house developed Value for Money Benchmark (where MOD would manage a solution that is delivered by a mixture of in-house and industry providers)."

Neil Firth, pictured left, Director LCS, said: "LCS staff have done an excellent job over the last few years continuing to deliver high levels of service to the military across procurement, storage and distribution.

"However, maintaining that military supply against a backdrop of changing requirements, the need to review our infrastructure and to drive further efficiencies has become a major issue.

"The LCS(T) project will enable us to identify and implement a new operating solution that ensures we continue to meet the operational imperative in the long term and does so in a way that delivers much improved value for money to the MOD.

"No decisions on the final operating model or locations will be made until the Assessment Phase is complete. This phase is expected to take at least twelve months.

"Decisions will not be easy or straightforward. This is both a political and an organisational challenge, and one that needs to realise something different, better and lasting."

And we ARE improving inventory management, says

PETER LUFF has pointed to investment in new IT systems to help record defence inventory as evidence that the MOD is changing the way it manages its stock.

"Appropriate reserves of equipment are essential to be able to deploy our Forces at short notice and sustain them on operations across the world," said the Minister. "The challenge of managing and maintaining vast amounts of equipment, including explosive materials, around the world should not be underestimated."

He added: "We are changing the way

we buy, store and dispose of equipment stocks and investing in IT systems to help us record the hundreds of thousands of items in our inventory."

Mr Luff said he was pleased the National Audit Office had recognised that changes were already making a difference, in its report released at the end of June.

The report said the MOD was buying more than it uses and not consistently disposing of stock it no longer needs. Money spent on unnecessary levels of stock could be made available to be spent elsewhere, it added.

#### **NEWSREEL**

#### SDSR will be Tornado D-day

UK policy to have a fast jet fleet based on two types of modern multi-role aircraft means the Tornado force will be run down broadly in line with the build-up of the Typhoon force and introduction of the Joint Strike Fighter. Defence Equipment, Support and Technology Minister Peter Luff said that, for planning purposes, the out of service date for Tornado is 2019, but no firm decisions need to be taken before the next SDSR in 2015. Typhoon Squadrons currently at RAF Leuchars will move to RAF Lossiemouth with Typhoons maintained at RAF Coningsby. Decisions on JSF basing will be made in due course.

#### Lunch talks

SIMON Jewell of Niteworks will speak on Governmentdefence industry relations in the next Defence Academy lunchtime seminar at Abbey Wood on 14th September from 1-2pm. Steve McCarthy, the MOD's Director International Security Policy, will speak on defence as an international business on 22nd October from 12.30-1.30pm. Register on 96161 4828.

#### Atlas loading

AIRBUS Military
has successfully
demonstrated
loading of NH90 and
Eurocopter EC725
helicopters onto
Atlas, formerly the
A400M transport
aircraft. The tests
were the first
demonstrations
of Atlas' cargocarrying capability
using real aircraft.

☐ Atlas unveiled: pages 24 and 25

#### **NEWSREEL**

#### Small is beautiful

**DURING** financial year 2011-12, approximately 41 per cent of new contracts were awarded to small and mediumsized enterprises. This represented around 13 per cent of the value of all new contracts placed in the year, according to the latest Parliamentary figures.

#### Pilots set for sea trials

THREE or four UK test pilots will be initially involved in the first sea trials of the F-35B aircraft, Defence Minister Peter Luff has said. Additional operational pilots will become involved as the programme progresses.

#### **Pageant costs**

COSTS associated with the Armed Forces Parade and Muster at Windsor, the Thames River Pageant and the Service of Thanksgiving are in the region of £880,000. This figure represents marginal costs incurred as the participation of the Armed Forces was deemed core business. It includes the costs of the flypasts.

#### Ark bids

SEVENTEEN proposals have been received to buy the former aircraft carrier HMS Ark Royal, Parliament has been told although no details have been released about the bidders. No decisions have yet been made about the future of the ship, said Defence Under-Secretary Andrew Robathan.

#### Brown is the new black!



- Temperate Combat for dismounted troops for high levels of activity in temperate climates
- Patrol for drivers/armoured troops conducting lower levels of activity in temperate climates
- Cold Wet Weather for dismounted troops for high levels of activity in temperatures down to minus 20 degrees Celsius

#### Research probes anti-air threats

DE&S AND Thales UK have signed a research contract for a technology demonstrator to improve resilience of future UK aircraft to anti-air threats.

The contract, worth £24.5 million, builds on research by Thales and the Defence Science and Technology Laboratory to develop an infra-red warning system to detect missiles, gunfire and other threats so countermeasures can be deployed.

The programme is being managed and delivered by DE&S' Air Weapons technology delivery team.

#### New boots set to change the colour of UK operations

DE&S HAS signed a multi-million pound contract for new boots for the Army, Royal Navy and RAF.

Personnel will receive a new range of brown combat boots to replace the black and desert combat footwear they currently wear.

As part of a contract worth £80 million, troops will have a choice of five different boots depending on where they are based and what job they are doing.

Each of the five boot types comes in two different styles, so personnel can wear whichever one is more comfortable for them.

The improved brown boots, developed to match the Multi-Terrain Pattern uniform worn by all personnel, will be made in two different width fittings,

taking into account for the first time the different shapes of men's and women's feet.

The new boots have been chosen after months of trials involving 2,000 troops serving across the world in Kenya, Cyprus, Canada and the UK. The brown boots will be rolled out to personnel in all three services later this year.

Warrant Officer Class 1 Julie Lodge from DE&S' Defence Clothing team said: "The boots we have now do the job well, but having footwear that is specially designed for female troops means we get an even better result and marks a real development in the kit available

"The new boots are very comfortable and fit so well I feel like I could run a marathon in them.

"We have had excellent feedback on the new boots from male and female soldiers, and we are buying a variety of styles to cover the full range of conditions we might encounter on operations, which means all our troops will have new boots for all seasons."

Regimental Sergeant Major Ian Wright of the Parachute Regiment took part in the trials, and said: "It is important that we continue to feel comfortable in the boots that we wear and reassured that they are going to provide the right protection and these new brown boots offer that."

Black boots will continue to be worn with most non-camouflage uniforms such as RAF and Royal Navy blues, and by units on parade in full dress uniform, such as Guards regiments on ceremonial duties in central London.

Our UK employees are proud to provide kit for Britain's armed forces. We design, manufacture and maintain fighter jets, armoured vehicles and naval vessels including the Typhoon aircraft, Scimitar light tanks and the Astute Class of submarine. But we're prouder still of the contribution and sacrifices made by our armed forces every day. Thank you.

## PROUD TO SUPPORT OUR ARMED FORCES.

#### MADE IN BRITAIN

BAE SYSTEMS
REAL PRIDE. REAL ADVANTAGE.

Farnborough round-up . . . Farnborough round-up . . . Farnborough round-up . . . Farnborough round-up . . .

#### Falcon system is flying high

FALCON, the tactical communications system, has completed systems field trials.

During the trial, data was successfully exchanged and networks linked across six places in the UK.

Deliveries of Falcon installations have begun in preparation for handover to the RAF and Royal Corps of Signals.

This delivery plan will continue to run to the middle of next year.

A Contractor
Logistics Support
element of the
programme has also
begun. Land Forces
Brigadier Andy Bristow
said: "Falcon offers
the potential to be the
deployed terrestrial
architecture of the
future, delivering an
information space that
the Armed Forces can
be proud of for the 21st
century."

#### Taranis on way to flight trials

TARANIS, the UK's unmanned combat air system technology demonstrator, has completed key tests on the way to beginning flight trials next year.

The low observable air vehicle completed radar cross-section tests at BAE Systems' Warton site and analysis indicated the programme met challenging targets from the MOD and industry.

Testing of the propulsion system has been completed at Rolls-Royce including measurement of Taranis' infra-red signature.

#### Mantis to the UK

BAE Systems intends to re-fly the Mantis unmanned air systems (UAS) concept demonstrator – this time in UK airspace. It will enable the company to continue to mature a number of UAS capabilities and technologies.

#### Typhoon set to face its next capability upgrade

THE RAF Typhoon Tranche 1 fleet is to be upgraded following the recent delivery of the Drop 2 upgrade package.

Tranche 1 Drop 1 saw active service as part of the Typhoon fleet deployed in support of Operation Ellamy in Libya. The second upgrade package, known as Drop 2, is now entering service with the RAF. Drop 2 will provide capability updates to a range of Typhoon avionic systems covering the displays and controls, attack and identification, defensive aids and communication sub systems while also delivering availability and sustainability improvements to the Tranche 1 fleet.

The first flight of a Tranche 1 Typhoon with the new product embodied took place at RAF Coningsby in May and will continue to be assessed in the

coming months ahead of its roll out to the Tranche 1 fleet. Robert Forshaw, Drops Desk Officer with DE&S' Fast Air Support Team, said: "The success of this upgrade programme has demonstrated the ability of BAE Systems to deliver weapon system improvements, integrated with a tailored support solution, to the RAF in collaboration with their industrial partners.

"The team has overcome some significant challenges to get to this stage and that's testament to the working relationships between BAE Systems, the German SUZ and QinetiQ teams involved in the project.

"I would thank everyone involved in the project and I look forward to working with them again on the Drop 3 and 4 programmes."

## First Wildcats handed over ready to face the future

THE FIRST two Wildcat helicopters have been handed over to the MOD.

DE&S is buying 34 Wildcats for the Army Air Corps and another 28 of the Maritime Attack variant which will be operated by the Fleet Air Arm.

The first two of the fleet of 62 were accepted by Defence Secretary Philip Hammond at the Farnborough Air Show from manufacturer AgustaWestland.

A support and training contract which comes with it is worth £350 million and will sustain 500 jobs at the Somerset company.

The first helicopters to come into service in 2014 will be Army variants with the first Royal Navy Wildcats delivered for training later this year before coming into service in 2015.

The Army Wildcat will primarily be used in a reconnaissance role, providing protection to soldiers on the ground. The Maritime Attack version will protect the Navy's fleet around the world.

Both variants have more powerful engines than the Lynx, enabling Wildcat to be used on operations all year round in extreme conditions

Wildcat also has a more robust fuselage to give better protection to the crews. Both variants are armed with a General Purpose and Heavy Machine Gun and the Navy's helicopters will also carry



Unveiled: the first of the new Wildcat helicopters has been handed over

Sting Ray Torpedoes. Army and Navy pilots will use high-tech interactive displays thanks to modern glass cockpits.

The in-service support and training contract will provide a specialist training centre at Yeovilton, where the Wildcats will be based. It will include flight simulators and a wide range of other equipment to train pilots, ground crew and engineers.

Mr Hammond said: "Wildcat represents a considerable advance over the current Lynx helicopters, bringing greatly improved performance and capability. The contract to

provide training and support will keep them flying wherever they are needed."

Chief of the General Staff, General Sir Peter Wall said: "This is an excellent helicopter which is very important to the Army Air Corps. We will be seeking to get it fully operational as soon as possible."

Chief of the Naval Staff, First Sea Lord, Admiral Sir Mark Stanhope added: "With modern sensors, equipment and weapons, it will be an outstanding asset that will maintain Royal Naval units at the cutting edge of worldwide maritime operations."

Farnborough round-up . . . Farnborough round-up . . .

Missile unveiled as new surface attack weapon

MBDA has unveiled SPEAR, a new, high-precision surface attack weapon for fast combat aircraft, at the show.

The weapon is proposed by the company to meet DE&S' requirement for a network centric, low collateral damage, multitarget stand off strike weapon for multiple loadout in the internal

carriage bay of the F-35 Joint Strike Fighter aircraft.

With a range beyond 100km and high sub-sonic flight, it is capable of dealing with fastmoving manoeuvring vehicles including main battle tanks, hardened structures, air defence units and missile launchers to naval vessels.

A compact missile measuring about two metres in length, the weapon features a multi-mode seeker for operations during day or night operations regardless of weather.

SPEAR draws its name from the MOD's Selected Precision Effects At Range capability requirements.



#### Atlas training underlines the vital role of industry

A £50 MILLION contract for new simulator for Atlas, the RAF's next air transport aircraft, has been hailed by the Prime Minister as an example of the success of the UK aerospace industry and its critical importance to growth.

The contract with Airbus Military will see Thales Training and Simulation in Sussex design and build the simulator for RAF Brize Norton, the future home of Atlas. The first of 22 aircraft is expected in 2014 to replace the C-130 Hercules.

Prime Minister David Cameron said: "In a hugely difficult time in the global economy UK aerospace is, quite simply, flying employing more than 100,000 people, turning over more than £20 billion a year, holding a 17 per cent share of the global market.

"But there can be absolutely

no complacency. International competition gets more fierce by the year. The UK has got to fight for every contract and every opportunity.

"We're pulling every lever



we've got to make sure those good, high-skilled jobs come to Britain and stay in Britain."

Minister for Defence Equipment, Support and Technology, Peter Luff, added: "I welcome the new A400M simulator which will provide our RAF crews with a challenging training environment that will support the live flight

preparation for Atlas, a uniquely capable transport aircraft."

Airbus Military supplies the aircraft parts and equipment plus a data and software package to enable the simulator to replicate Atlas' flight and mission characteristics.

This will be the fourth simulator of its type - with the first ordered for Airbus Military's training centre in Seville, Spain, and the second and third ordered by

France and Germany. Further simulators are expected to be ordered by the Atlas partnering nations. representing significant investment in UK jobs and technology.

#### Meteor proves a direct hit

MBDA's Meteor Beyond Visual Range Air-to-Air Missile has ended its guided firing programme with three direct hits from three firings during Electronic Protection Measure (EPM) trials against targets deploying countermeasures.

MBDA is on track to complete qualification and make the first production deliveries by the end of the year.

Integration of Meteor with Typhoon is progressing as the cockpit design is trialled by pilots from the partner nations at BAE Systems' site at Warton.

Steve Long, BAE Systems test pilot, said: "Having Meteor sat under your wings means you're stepping into an aircraft that instantly gives you the confidence and reassurance to conduct your mission."

A first firing from Typhoon is planned for later this year.

#### **Brimstone** success

THE first firing of an operational Dual Mode Brimstone missile against a fast in-shore attack craft has proved a success. The missile was fired from an RAF Tornado GR4 at the QinetiQ Aberporth range in Wales.

In-shore attack craft are small, fast and agile and a growing maritime threat.

#### **NEWSREEL**

#### Managing human science

**BAE Systems will** lead management of the Defence Human Capability Science & Technology Centre advancing application of human sciences across defence. The MOD's **Defence Science** and Technology Laboratory has awarded the contract and BAES will manage a fouryear, multi-million pound programme of research supporting priority human capability requirements from across the MOD. The Centre will deliver research in areas such as enhancing physical and cognitive performance. reducing soldier burden while maximising safety and exploiting human behaviours in conflict resolution.

#### **Cost control**

BMT Hi-Q Sigma will implement a risk management change programme for DE&S' Joint and Battlefield Trainers, Simulations and Synthetics Environments team to help deliver projects to stringent performance, cost and time targets.

#### Cadet boost

**NEW** cadet units across England will be given a £10.85 million boost from the MOD and Department for Education so more young people can join up and take pride in their community. Over the next three years new units will be created through partnerships with existing units in schools or by creating completely new units. The money will go towards essential equipment and training of staff.

#### BT helps fight against the cyber threats

A SEVEN-YEAR cyber secrity agreement with BT will see the comany expand its cyber defence service.

Work has already begun on the agreement which builds on an existing service and gives the MOD a wider and deeper defence capability across its global IT network.

BT will now deliver and integrate a range of new capabilities for the cutting-edge service, which is designed to deter attacks, as well as respond to and recover from them.

Air Commodore Tim Bishop, head of service operations at DE&S, said UK Forces depend on computer networks at home and in operations around the world.

"Over the past five years we've seen a significant rise in the number of threats to the UK's national

security through cyberspace, so it is crucial that we look to constantly improve our defence mechanisms to meet those threats," he said.

He added that it made sense to develop the relationship with BT further.

Neil Rogers, president of global government at BT Global Services, said the extended agreement testifies to the success and strength of BT's collaboration with the MOD.

"The service has already delivered a range of benefits in terms of security and operational efficiencies," he said. "This deal will boost those gains further."

BT added that it is building on its long and close working relationship with the Government by helping to deliver the UK National Cyber Security Strategy.

## Simulators to help guard against biggest threats



Left: training to deal with the CBRN threat, personnel at work on Salisbury Plain.

Below: the Defence CBRN Centre at Winterbourne Gunner

THE LATEST simulators to train service personnel to deal with chemical, biological, radiological and nuclear threats have been delivered on time and within budget.

UK manufacturer Argon Electronics has supplied the new systems including instrumentation and simulation software the Defence Chemical, Biological, Radiological and Nuclear Centre (DCBRNC) at Winterbourne Gunner on Salisbury Plain.

DE&S' CBRN protection leader Phil Strudley said: "Acquisition of this latest equipment is an important step for the CBRN training centre, providing our trainers with a range of sophisticated tools that

allow us to simulate a wide range of threat scenarios."

The CBRN team worked closely with Argon to ensure that the contract was fulfilled on time and within budget.

"The equipment was specified, ordered and delivered within 16 weeks. This shows what can be achieved with a good working relationship between our DE&S team and a specialised UK manufacturer," said Mr Strudley.

The Argon equipment includes the company's latest instruments, simulators and the advanced PlumeSIM wide area field exercise and desktop training system. This enables instructors to manage multiple

remote simulator instruments under a fully configurable virtual plume, in real time, over user selected mapping.

Mr Strudley added: "Tools such as PlumeSIM will allow us to train personnel faster and more efficiently, giving them the knowledge and experience that will help them perform an even better job once they return to operational duties.

"These advanced simulators will also help reduce the integrated logistic support costs associated with our detectors."



FOXHOUND, THE UK's newest light protected patrol vehicle, has received the thumbs-up from those training on it at Camp Bastion.

The vehicle arrived in Helmand Province last month, offering better blast protection and counter-IED equipment for troops on the ground.

Former serviceman Ricky Haynes is the Defence School of Transport's Foxhound training team line manager.

He said the patrol vehicle has performed superbly so far, and that British Army personnel will receive a huge capability boost from its introduction to theatre:

"This platform will have a multitude of roles but initially it will be used for force protection out on the ground," he told Soldier magazine.

"It is designed for an urban

environment and has a fourwheel steer. It is proving to be very reliable.

"We have done trials in hot weather and extreme conditions and it has excelled.

"From what I have seen so far it is superb, and the technology it has is sensational. It is nice to drive and there is a lot more space in the back."

Signaller Mark Lawrence of the Royal Corps of Signals was one of the first to get behind the wheel of Foxhound during early driver-training.

"The V-shaped hull is similar to that of the Mastiff, and it offers increased protection as it throws the force of any blast wide of the vehicle," he said.

performance crosscountry is amazing and I cannot see it struggling.

"The in-theatre standard has

been extremely high and we are very confident it will perform well outside the wire."

Foxhound is with infrared technology and thermal-imaging and has three screens inside the cab that offer a 360-degree view around the vehicle for high levels of situational awareness.

The vehicle also boasts an extremely effective night-time capability, while its engine can be removed in the space of just 20minutes should any mechanical problems arise.

The rear compartment can comfortably seat up to four soldiers and offers storage space for daysacks and other kit.

DF&S 200 ordered Foxhounds in November 2010, and 100 more were requested last year as part of a £400 million package.

#### **HP** continues its MOD backing

**HEWLETT PACKARD (HP)** Enterprise Services will support and maintain IT efficiency across the MOD in a three-year contract worth around £15 million.

"HP will help the MOD meet commitments to government efficiency while minimising complexity," said Paul Beavin of DE&S' Networks

"The Royal Navy, British Army and the RAF can rely on a consistent and transparent level of support for IT assets in the UK and at overseas bases.

This contract has been adopted as a model by the Government Procurement Service, part of the Cabinet Office's Efficiency and Reform Group, so could be used for other government departments."

HP's new contract builds on more than ten years of support and includes core services, with the facility to incorporate additional bespoke and adhoc services. Core service areas cover:

- · Hardware break-fix, rapid repair or replacement of equipment, with higher levels of support for business-critical requirements.
- Bespoke software support to ensure complete operational continuity.
  - 24/7 UK call centre.
- Hardware refurbishment, redeployment, disposal and recycling.
  - Asset maintenance.
- Computer room environment management.

The contract has an option for a further two years. Currently HP supports more than 200,000 of the MOD's personal computers, office equipment and telecommunications assets.

"This new pangovernment enabling contract is set to be a model for future engagement with the public sector," said Melanie McGrory, Account Executive, HP Enterprise Services.

"It reflects HP's experience in managing some of the world's most complex, multi-sourced environments.'

#### Marchwood - private sell-off is an option

MARCHWOOD MILITARY port may be sold off to the private sector.

But it will continue to be used as the port where military equipment is embarked on ships for transport abroad and also its return to the UK.

The port, known as the Sea Mounting Centre in Hampshire, is home to personnel of 17 Port and Maritime Regiment who provide a key capability to the Armed Forces.

The centre also provides a valuable training facility.

Announcing the decision in Parliament on 12th July, Minister for Defence Equipment, Support and Technology, Peter Luff, said options for the sale of Marchwood had been assessed along with consideration of finding

an alternative port for the UK's military activities.

Marchwood remained the preferred choice. "This will ensure that the military outputs

can still be met while allowing greater economic and commercial benefit to be realised from the site," he said.

"In doing so we envisage a much closer relationship between the MOD and industry in delivering these capabilities from a privately owned sea mounting centre."

Mr Luff added that the MOD will develop a commercial proposal by the end of the year.

Any sale will be dependent on market conditions at the time and will need to show that defence capability can be delivered in a way which represents value for money.

#### **NEWSREEL**

#### Land vehicle exports

THERE have, as yet, been no firm export opportunities for the new Foxhound light protected patrol vehicle, International Security Minister Gerald Howarth has told Parliament. He added: "However, the UK Trade and **Investment Defence** and Security Organisation, as the Government lead for defence and security exports, is already exploring and supporting the aspirations of General **Dynamics Land** Systems-Force Protection Europe in any export opportunities which arise in relation to Foxhound, Its recent deployment on operations will enable us to assess its full capability."

#### Marshall partners

MARSHALL Aerospace has agreed with Lockheed Martin to become the first commercial company to install Hercules C-130 Centre Wing Boxes, the main load-bearing component of the airframe which can determine overall operational life of the aircraft. Marshall is the prime contractor for DE&S' 24-year contract worth £1.52 billion for engineering support to the Hercules C-130J and K type aircraft.

#### Ship support

DE&S' Maritime Equipment Systems team has awarded a fouryear contract to Babcock to support compressors and associated equipment on the Royal Navy's ships and submarines.

## Ammunition contract hits another target

SUPPLIES OF ammunition to UK Armed Forces continue to be guaranteed after the latest upgrade in the country's production facilities.

A new £75 million plant in Washington, Tyne and Wear houses a modern forge run remotely from a control room. It will carry out machining of large calibre tank (120mm), 81mm mortar and 105mm/155mm artillery ammunition using robotic machining cells and new, environmentally-friendly, paint and treatment capabilities.

The plant is part of DE&S' £2 billion long-term MASS (Munitions Acquisition, the Supply Solution) partnering agreement with BAE Systems signed in 2008.

It covers 80 per cent by volume of the general munitions – including small arms, mortar bombs, tank, artillery and naval gun shells – used by UK Forces in operations and training.

DE&S Head of Munitions Nick Hunt said: "This official opening, on time and within budget is a major milestone in the modernisation of the UK's munitions manufacturing facilities.

"BAE Systems deserves great credit for this achievement, which will help drive down munitions prices and maximise future efficiencies."

Work started on the new



Princess Anne, who has links with more than 20 military units who use products from the Washington factory, is pictured with managing director of BAE's Global Combat Systems Muntions business Charlie Blakemore (left) and site boss Simon Miller

site – opened on 2nd July by the Princess Royal – at the beginning of 2010 and production has now been almost completely transferred there from nearby Birtley. The move underpins around 230 jobs at the site.

The company's Global Combat Systems Munitions business is carrying out a five-year £206 million transformation (more than half of which is funded under MASS) which will also modernise sites at Radway

Green near Crewe and Glascoed in south Wales. The programme is on track to complete by the middle of next year.

UK operations have demanded a consistently high delivery performance from the company. On time deliveries under MASS have been as high as 99.95 per cent in 2009, 98 per cent in 2010 and 99 per cent in 2011 compared to an average 70 per cent under previous arrangements.



PLYMOUTH-BASED submarine *HMS Turbulent* has left operational service after nearly 30 years.

A decommissioning ceremony was held on 14th July for the second oldest of the Royal Navy's Trafalgar class submarines. It was attended by DE&S' Chief of Materiel (Fleet) Vice Admiral Andrew Mathews, pictured right.

Since being commissioned in 1984 *Turbulent* has been deployed on patrols as far apart as the North Atlantic and Far East, and saw service in the Adriatic during the Balkans conflict.

Turbulent heads for a more tranquil future



Lynx 500: Captain David Elford, left, joins Commodore Graeme MacKay, Geoff Hewson of Vector Aerospace, Col Neil Dalton and Lt Col Neal Hutchinson beside Royal Navy Lynx XZ255

#### Lynx overhauls top the 500 mark

LYNX TEAM leader Captain David Elford joined other members of the helicopter community at the handover of Royal Navy Lynx XZ255.

The occasion on 6th July marked the 500th overhaul of an MOD Lynx at Vector Aerospace UK's Fleetlands site since the start of the Defence Logistic Transformation Programme for rotary aircraft in April 2005.

The handover had a special meaning for a number of Vector employees, who remember working on Lynx XZ255 the first time it came in for overhaul in 1997.

The aircraft was originally a Mark 2 built in Yeovil in 1979. In 1997 it returned to Fleetlands for conversion to Mark 8 Saturn standard. It has been a display aircraft, has embarked on a number of Royal Navy ships and is part of the London Olympic detachment on *HMS Ocean*.

## T45 kit set to hit a wider market

THE MOD and Thales UK are working to commercialise the UK's fully digital radar electronic support measures system, which has had its first use in the Royal Navy's Type 45 destroyer fleet.

A licence agreement has been signed between Thales and Ploughshare Innovations, the Defence Science and Technology Laboratory's (Dstl) technology transfer company.

It gives Thales the opportunity to further develop and supply the technology to other naval forces beyond the MOD.

The direct radio frequency sampling and wideband digital receiver technology was developed as part of Dstl's research programme, resulting in a complete digital solution from antenna to console.

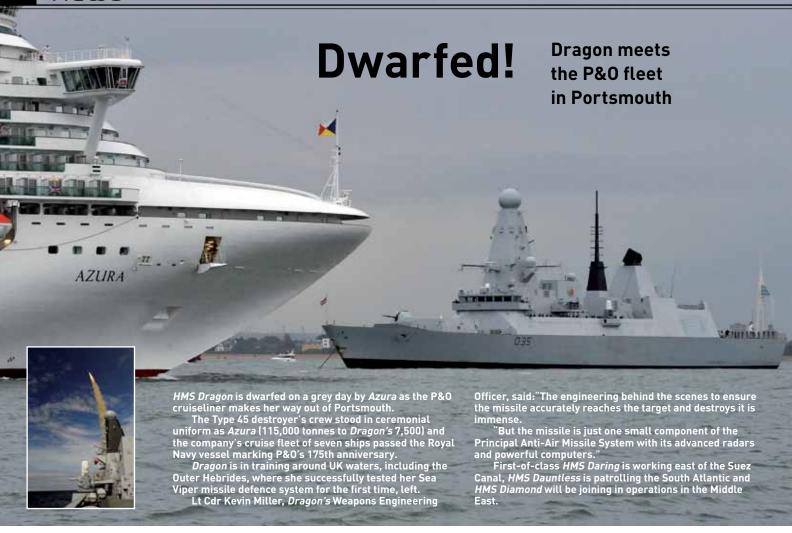
The system provides increased quality in the information it contributes to overall situational awareness.

Thales, working with Dstl, has matured this technology to provide the Royal Navy with a new generation of electronic warfare support and threat-identification capabilities.

Phil Naybour, head of Thales UK's naval business, added: "Thales is excited to be working with Ploughshare to develop a world-class technology. This is now in service with the Royal Navy and is providing it with an unrivalled capability, even in the most demanding of theatres.

"With this exclusive licence, Thales is looking forward to the launch of a new export product later this year."

#### LTPA **T&E begins here** Are we on your radar for T&E? The Long Term Partnering Agreement (LTPA) is an innovative collaborative approach to provide Test and Evaluation, Training and support services to the MOD. The LTPA is a framework agreement under which the majority of your fixed costs associated with Test and Evaluation are centrally funded. If your project has a T&E requirement call now, or visit the website to find out if the costs of your trial are covered under the LTPA. Air Land Sea 0800 015 0594 www.LTPA.co.uk **QinetiQ** www.LTPA.co.uk is a QinetiQ registered domain name



www.marshall-ls.com

Have a Refriet 344 5138

#### Agility Quality Integrity







#### **Protected Workspaces**

Integrated Workspaces
Deployable Workspaces
Infrastructure Workspaces
Ground Station Workspaces
Customer Support



Marshall Specialist Vehicles Ltd

The Airport, Newmarket Road, Cambridge CB5 8RX Tel: +44 (0) 1223 377094 Fax: +44 (0) 1223 373147 info@marshall-ls.com



#### Richmond the latest frigate to return to work



23 frigate HMS Richmond, pictured left, has been on sea trials around the UK following an on-schedule in-budget ten-month upgrade and maintenance by Babcock at Devonport.

Capt Chris Saxby, Superintendent Fleet Maintenance (Devonport). said: "Richmond has been a demanding engineering project with an extensive structural engineering repair programme involving over 250 structural inserts.

"The incorporation of this

high level of work, together with numerous upgrades and enhancements within the programme has been a remarkable achievement. Richmond is in good shape to achieve Fleet Date."

Around 500 items have been overhauled, 20km of cable installed and 13.000 litres of paint applied during the £20 million docking.

Mike Weeks of Babcock's said: "We have delivered Richmond safely, to quality and schedule, and at optimum value for money."

#### Carrier comms takes a great leap forward

Communications System Integration Facility has opened at Thales UK's site at Crawley, a major milestone for the Oueen Elizabeth class carrier programme.

The facility will serve progressively integrate a number of major Thales communications systems destined for the two new carriers, with the work being carried out on behalf of the Aircraft Carrier Alliance.

Admiral Brunton, Deputy Director Ships and Director Ship Acquisition at DE&S, opened the new facility in front of guests from across the Alliance, the Royal Navy and the MOD.

Booth, Ian appointed Programme Director, and Phil Naybour, head of Thales UK's naval business, were among the attendees.

Rear Admiral Brunton said: "The opening of the Communications Integration Facility marks a significant



Above: Rear Admiral Brunton, third from left, joins guests on the tour around Thales UK's carrier communications integration facility in Crawley

milestone in the programme. It is a reminder that we are bringing essential mission systems to life and not just welding large blocks of steel together, impressive as that is.

'It is a great example of how alliancing and early integration activity can come together to deliver results that are best for project, best for the maritime

industrial sector, best for defence and best for the UK."

Each communications system is being constructed stand alone to present for factory acceptance in the facility at full scale, before being integrated with the other sub systems.

Once integration complete, systems will be sent for installation into the ships, where Thales staff will assist with the commissioning, on board integration and final acceptance of the equipment.

Guests were shown around the new facility by the resident Thales radio communications products team. Approximately 40 people are employed on the carrier comms programme at Crawley.

■ Carrier news: page 19

#### **NEWSREEL**

#### **Anglo-French** force on way

GOOD progress has been made towards establishing the Combined Joint **Expeditionary Force** (CJEF) between the UK and France which, along with a deployable Joint Force Headquarters, should be available for military operations by the planned date of 2016. Armed Forces Minister Nick Harvey reported to Parliament that agreement has been reached with the French on logistics, command and control, and how the single service components will operate together.

#### **UK** in front

AN £11.7 million contract has been awarded to QinetiQ to fund research to help maintain UK expertise in defence advanced materials. QinetiQ and partners - Malvern Optical, BAE Systems, MBDA, NPL, Q-Par Angus and several UK universities - will establish facilities in Farnborough and Pershore to enable UK companies to conduct research and test new materials. Funding has been granted by the Defence Science and Technology Laboratory.

#### Vehicle move

**GENERAL** Dynamics UK has been awarded a £4 million contract to integrate the British Army's first Systems Information Exploitation/ Health and Usage Monitoring System into 578 Mastiff, Ridgback, Husky, Jackal, Coyote and Wolfound vehicles to help improve their availability.

☐ The Tactical and Command and Control Voice System for Queen Elizabeth has been commissioned in Crawley.

It is the core voice system for the two ships with nearly 300 tactical voice terminals which ship's staff will use for plain and secure communications with aircraft and other platforms externally, and for internal command and control.

Its entire network will be fully tested at Crawley including its interfaces to the other internal and external communication systems, many of which are being procured from Thales but some also provided as Government Furnished systems like Milsatcom.

This will ensure systems are capable of operating in highly demanding scenarios long before it is installed on the carriers, configured ready for harbour and sea trials, and de-risking the commissioning programme and in-service dates.

#### **NEWSREEL**

#### Firm wins Hunt work

**BAE Systems** Maritime Services has awarded TUV **SUD Product** Service a contract to develop an electromagnetic compatibility test programme for the Machinery Control and Surveillance system being installed on the Royal Navy's eight Hunt class Mine **Counter Measures** Vessels. TUV SUD will develop a test plan for the new system, which is based on commercial off-theshelf equipment, at its Hampshire laboratories. The work is part of a six-year contract worth £15 million, awarded to BAE Systems to replace propulsion systems on the Royal Navy's MCMV fleet.

#### Safety first

ANY safety lessons from a recent fire aboard submarine USS Miami will be applied in the Royal Navy, Defence Minister Peter Luff has promised in reply to an MP's question. "The MOD has a strict regime to manage fire safety on submarines. This includes routine assessment of all fire incidents on Royal Navy ships and submarines, as well as those fire incidents reported by foreign navies,' he said.

#### **UOR** staff

THERE are
455 full-time
equivalent DE&S
staff delivering
urgent operational
requirements,
according to the
latest figures.
There are also extra
personnel across
the MOD supporting
equipment
delivered through
the UOR process.

RAF PERSONNEL and DE&S staff braved bad weather as the RAF Ensign was lowered for the last time at RAF Stanbridge.

The formal closure ceremony in June signalled the end of a long and illustrious history for the RAF station in Bedfordshire, which will close fully in March next year.

Head of Establishment, Flt Lt Steve Hawkins, who moved to Stanbridge in March 2011 to manage the closure, said something special was needed to mark the end of the site.

"I have been in the RAF for 33 years and this base is totally different from any I have served at. Because it's so small it has a unique atmosphere," he said.

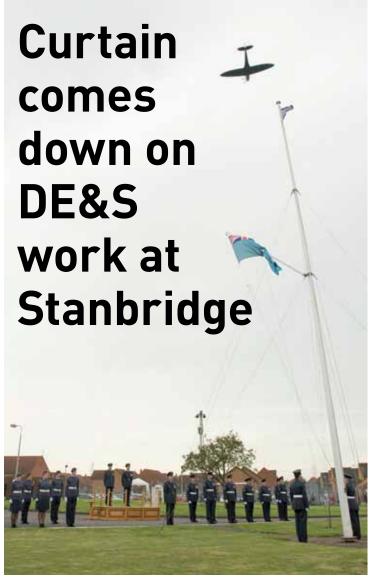
Stanbridge has been home to the RAF Supply Central Control System computer, controlling military logistics worldwide.

The service has been taken on by Boeing Defence UK and staff will transfer to a purposebuilt logistics centre in Milton Keynes by the end of the year.

The Stanbridge gates will shut for the final time next March with the computer system moving to a data centre elsewhere in the UK.

Fourteen military personnel from DE&S organised and took part in the parade while Air Commodore Barrie Thomson, Head of Logistic Network Enabled Capability, was the event's reviewing officer. He was joined by other members of Log NEC.

The rest of RAF Stanbridge is made up of Boeing Defence UK and Steria contractors.



Flag day: the RAF Ensign comes down at Stanbridge, watched by RAF personnel and local members of the Air Training Corps. A Spitfire makes a fly-past over the ceremony

#### Boeing is first to answer ministerial call

BOEING HAS become the first to sign up to a new policy encouraging overseas-based companies to make a firm commitment to continue business activities in the UK for the long term.

Following publication of the MOD's White Paper 'National Security Through Technology' this year, overseas-based suppliers have been encouraged to invest in the UK's defence and security sector through the launch of a new Defence and Security Industrial Engagement Policy (DSIEP).

Industrial Engagement Policy (DSIEP).

DSIEP was launched by Peter Luff, Minister for Defence Equipment, Support and Technology. It is hoped other companies will follow Boeing's lead.

Mr Luff said: "The MOD is delighted that Boeing will continue to invest in the UK's defence and security sectors and provide supply chain opportunities for UK companies, particularly small and medium-sized enterprises.

"Boeing's commitment demonstrates the competitiveness of UK industry and we look forward to continuing and extending our relationship with this world class company.

"I also hope that other overseas-based

suppliers will follow Boeing's lead and sign up to our new policy in due course."

Boeing's UK Managing Director Mike Kurth said: "Boeing is honoured to support the UK with great platforms like Chinook, C-17 and Apache. The previous industrial participation opportunity associated with the supply of these platforms was a significant factor in our commitment to increase our UK defence footprint that now employs more than 800 people."

"This brings significant defence capability onshore for helicopter maintenance and modification, logistics transformation, training and advanced modelling and simulation to mention just

"This is only part of the story; our focus on the UK supply chain means Boeing also spends around \$1 billion each year with 250 suppliers that have become an invaluable part of the Boeing supply chain.

"The new policy provides the stimulus for longer term engagement and we are delighted to be the first company to sign up."

☐ 'Breathtaking' is how the Director of DE&S Ship Acquisition has described the scene during the latest assembly milestones of Queen Elizabeth at Rosyth.

☐ A major hydraulic skidding operation saw the massive Super Block 03 - mid hull and centre block sections - moved 90 metres north to meet Lower Block 02 - accommodation and auxiliary machine spaces - as the second of three assembly cycles began in June.

☐ "I am incredibly impressed with the detail and engineering precision that is undertaken during the assembly cycles with the end produced being a breathtaking aerial view of the first ship in the dock, which is history in the making," said Rear Admiral Steve Brunton.

☐ The hull is on track to be fully assembled by 2014.



Progress: *Queen Elizabeth* takes shape at Babcock's yard in Rosyth as the second assembly cycle gets underway

#### Propulsion gets personal

BERNARD GRAY and his wife Katie will help 'power' the second of the two *Queen Elizabeth* aircraft carriers throughout its operational life.

Rolls-Royce hosted a ceremony in Bristol to mark the naming of the two MT30 gas turbines for *Prince of Wales* 'Bernard' and 'Katie' after the Chief of Defence Materiel and his wife.

At 36 megawatts each, 'Bernard' and 'Katie' are two of the world's most powerful model of marine gas turbine, which alongside diesel engines will produce 109 megawatts of power.

A delighted Mr Gray said: "The MT30 will provide the naval operator with levels of efficiency, flexibility and reliability not hitherto experienced. The advantage this will bring to the Royal Navy in terms of cost-of-ownership and operational performance is clear."

The gas turbines are named after those who have made a significant contribution to the carrier programme, and follow 'Bob' and 'Jean', the names adorned to the two MT30s for *Queen Elizabeth*, named after Rear Admiral Bob Love and his wife Jean.

Rolls-Royce is part of the Power and Propulsion Sub Alliance, alongside Thales, L-3 and Converteam, responsible for the power and propulsion systems for electrically driven carriers.



Mr Gray and his wife Katie join DE&S Head of Ships Tony Graham at the Bristol naming ceremony while, below, it's steel cut time at Govan for Lower Block 04 of *Prince of Wales* 



- ☐ The first steel cut for Lower Block 04 of Prince of Wales took place at BAE Systems' Govan yard last month
- ☐ Housing the two main engine rooms, a medical area and accommodation, the block will weigh more than 11,000 tonnes on completion.
- ☐ The huge section of hull is now under construction for both ships at Govan, along with Lower Block 03 for the second ship. The aft island, responsible for flying control on the ships, is progressing at BAES' Scotstoun facility
- □ Lower Block 04 of Queen Elizabeth is due to leave Govan for Rosyth in November. It will be the last hull section of Queen Elizabeth to arrive.
- ☐ Rear Admiral Steve Brunton said: "This latest milestone shows how well the Prince of Wales build programme is progressing with the Lower Block 04 being one of the larger hull blocks being constructed."

## Lightning II – new agility for the 21st century

The UK has formally accepted the first of the Joint Strike Fighters, to be known as Lightning II, at a ceremony in Fort Worth, Texas. The aircraft is the Short Take Off and Vertical Landing (STOVL) version of the F-35, manufactured by Lockheed Martin, and the UK is the first country outside the US to receive these aircraft.

Defence Secretary Philip Hammond has announced the MOD intends to order a fourth Lightning II aircraft next year to add to the three already on contract.

The RAF and Royal Navy will conduct flight trials of the jets which will operate from land bases and from sea.

The aircraft is planned to be operational from land based airfields from 2018, when it will also begin flight trials off carrier *HMS Queen Elizabeth*.

Mr Hammond, pictured below, said: "This hugely capable combat aircraft is now officially British and in the hands of our expert pilots. Highly skilled British aerospace workers are also playing a vital role in delivery of Lightning II with

UK companies involved in 15 per cent of the production.

"Having taken decisions on the final designs of our new aircraft carriers and balanced the MOD's budget we can now proceed confidently to regenerating our carrier strike capability with these cutting edge stealth combat aircraft."

DE&S' new Director Combat Air and former Head of the Lightning project team Air Commodore Graham Farnell said: "It was hugely exciting to take part in the handover of the first aircraft to the MOD and a great day for the DE&S team, all of whom have been involved in a lot of hard work alongside our US and industry colleagues to achieve this important milestone. This event really does mark the dawn of a new capability for the UK's Armed Forces.

"We are now looking forward to the award of the contract for the fourth aircraft and long lead items for the first batch of production aircraft as this programme gathers pace."

Team Requirements Manager

Wing Commander Willy Hackett said at the event: "This aircraft has stealth characteristics built in so we can take it into harm's way. It has a wonderful range, large internal fuel load and a powerful array of sensors to give the pilot complete situational awareness."

He said alongside stealth, the Lightning II would have the world's most advanced radar, an advanced targeting system, 360 degree camera surveillance outside the aircraft to allow the pilot the ability to see all around, and full network enabled surveillance and intelligence gathering capabilities.

Wg Cdr Hackett added the







Lightning II would also introduce voice activation of sensors and weapons by the pilot and a 'look and shoot' helmet alongside surveillance, intelligence and communications facilities so powerful that the aircraft would be able to fulfil wholly new mission types.

It will introduce new capabilities to the UK's Armed Forces, including suppression of enemy air defences, close air support to troops in the worst weather at night, offensive counter air (where stealth would enable the aircraft to penetrate hostile airspace unescorted) and defensive counter air – a capability for the RAF and Royal Navy that is many times more effective than that provided in the past.

Onboard the Queen Elizabeth aircraft carriers, the jet would take off at its maximum weight of nearly 27 tonnes

land either vertically or using the novel UK-developed Short Rolling Vertical Landing (SRVL) technique. This would enable the jet to land at a much higher weight than is possible in a purely vertical landing.

Wg Cdr Hackett said: "SRVL is under development for the carriers but it means the aircraft would fly in at around 60 to 70 mph and then brake to a stop on the deck, without the need for any costly arrester gear. It will be able to land up to 1.8 tonnes heavier than otherwise be possible, meaning unexpended weapons can be brought back to the ship."

The UK was the first of eight international partners to join the F-35 programme which Lockheed Martin is developing with principal industrial partners Northrop Grumman and BAE

Systems. BAES brings a heritage of capabilities including short takeoff and vertical landing experience, advanced lean manufacturing, flight testing and air systems sustainment, and is responsible for the F-35's aft fuselage, fuel system, crew escape and life support systems.

The UK will play a vital role in global production, follow-on development and sustainment over the next 40 years, bringing strong economic benefits.

The aircraft will become a mainstay of future air combat forces while the three distinct variants of the F-35 will replace the A-10 and F-16 for the US Air Force, the F/A-18 for the US Navy, the F/A-18 and AV8-B Harrier for the US Marine Corps. It is also likely to replace fighters for at least 10 other countries.

## Hull and high water!

DE&S has a huge role as an intelligent customer for industry, with the specialist knowledge to ensure MOD's needs are met. In the first of a series of articles expanding on this role *desider* looks at the development of the underwater hull design for the *Queen Elizabeth* class aircraft carriers

raditional designs for underwater hull shapes of the Royal Navy warships of the past have tended to focus on high length-to-beam ratios and complex and costly curvature and double curvature in order to get best possible top speed through the water.

The underwater hulls of the *Queen Elizabeth* carriers are different from this in almost every important respect. Their hulls are far wider than any other Royal Navy warship, complex curvature has been replaced on large sections of the hull by flat plates to cut costs, a bulbous bow the size of a small submarine is another first for a Royal Navy carrier and at the stern a transom flap which doubles as a landing platform for boat passengers is a further innovation. Finally, the propellers have the highest power loading of any RN ship.

The pressures on modern hull designers have become more, rather than less complex, according to MOD civil servant Neil Mounty, who is Platform Client Assurance Manager for the project. He is a naval architect and his role in the earlier stages of the project as an intelligent customer was to make sure the ship was capable of fulfilling its design requirements, including speed and sea-keeping. As construction of first of class *Queen Elizabeth* pushes ahead, his role has changed to include the progressive acceptance of completed areas of the ship from contractors

He works as part of the four-cornered Aircraft Carrier Alliance (ACA), which is overseeing construction and delivery of the vessels. MOD is one partner, alongside contractors BAE Systems, Babcock and Thales.

The traditional focus on achieving design speed for the ships is still there, but the team faces the additional complexity of achieving the requirement at the end of the ship's life, after up to 50 years of service, at a deep load which on current estimates is expected to rise above 65,000 tonnes.

Stability when operating aircraft is another constraint, as is stability when damaged, and fuel economy at cruising and top speeds.

Mr Mounty said: "We didn't start entirely from scratch with hull design.



Neil Mounty, Platform Client Assurance Manager, left, with Rob Weedon of Thales, the Alliance's Chief Naval Architecht

We looked at a range of other existing ships of the same sort of size as the carriers were expected to be and looked at whether we could modify their designs to suit our needs.

"For example, early in the design process we studied cruise liners, because they used the podded propulsors that were originally proposed for the carriers which necessitated a flat aft section from which the pods would have hung."

Thales Chief Naval Architect Rob Weedon added: "We used a wind tunnel to test the final underwater hull design for the after end of the ship, the same one used to test many F1 cars. We built a model and ran smoke at speed over it to test for problems in the flow over the back of the hull and the 'A' frames on which the propeller shafts are fixed. Results proved we were on the right track."

Mr Weedon, a BMT employee on secondment to platform design authority Thales, is the lead on overall ship design, including hydrodynamics, hull design and general arrangement for the ACA.

He said: "We needed plenty of beam in order to fit in large diesel engines low in the hull, have efficient stores spaces and in order to meet the need for ship stability for operating aircraft in rougher sea states. The ships have a large flatsided parallel mid-body section which gives very good internal volume but

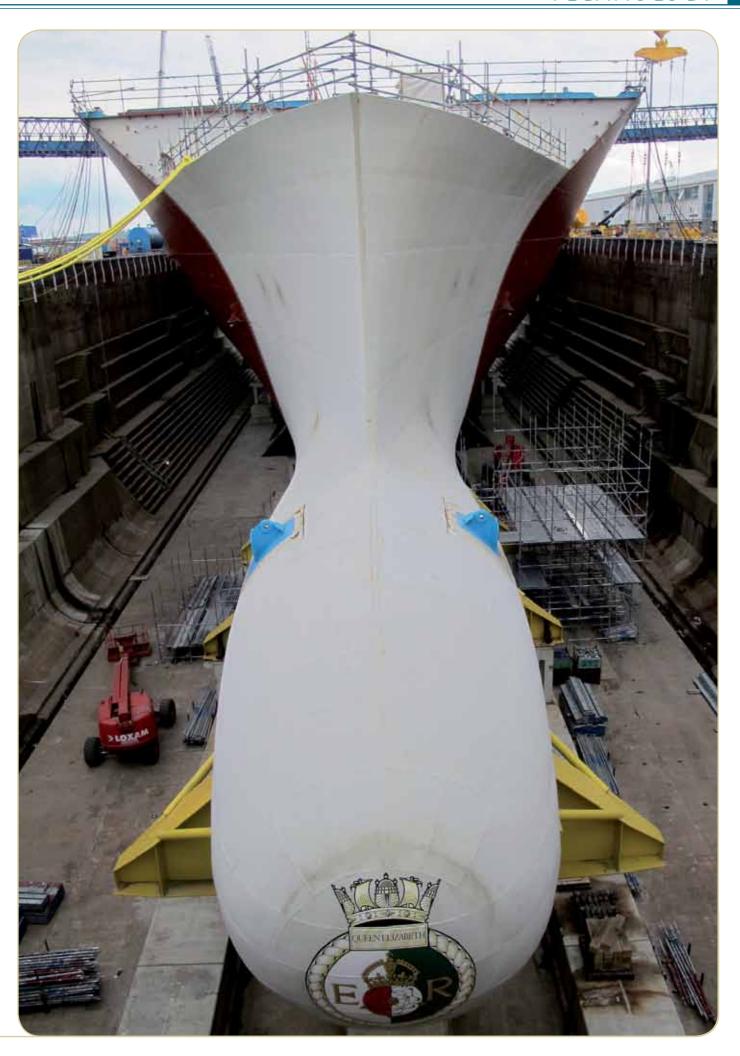
is not designed for speed. It's cheaper and easier to build than complex more traditional curved shapes needed for high speed – but we did not need high speed for these ships.

"The stern transom platform, or stern flap is an extension to the hull that increases its waterline length and modifies the flow of water leaving the hull to provide a cleaner exit. We chose to increase its depth so that it could also be used as a boat embarkation point.

"The main point of this approximately ten-metre long bulbous bow is that it cancels out the huge bow wave a traditional design will develop. The bow wave is a colossal waste of energy and a major drag on the ship. This bulbous bow projects well forward of the main hull and alters the pressure field in the water at a range of speeds.

"All this hugely complex design work is greatly helped by the advanced computer design facilities that we can draw on in the ACA, but we still work with more traditional methods," he said.

Now that construction is well-advanced on *Queen Elizabeth* the two men and their teams are looking ahead to the start of contractors' sea trials in the second half of this decade, during which years of painstaking development and design work on the underwater hull design will finally be put to the test.



### Atlas maps out an air tra

#### A400M's new name is unveiled at the Royal International

tlas will join the Royal Air Force in two years' time to help provide the UK military's future air transport force.

The next generation military transport aircraft, previously known as A400M, was officially named at a



ceremony at the Royal International Air Tattoo at RAF Fairford last month.

Air Marshal Sir Kevin Leeson, DE&S' Chief of Materiel (Air), said: "Atlas will take over from the C-130 Hercules, which has been a huge success and valuable asset for our Armed Forces for decades, as the workhorse of the RAF.

"Atlas will be a superbly versatile performer with strategic reach and speed and impressive tactical qualities. It will be a valuable addition to the RAF's future stable of aircraft."

The aircraft will, along with the Voyager and C-17, provide the UK military's future air transport force.

The UK is buying 22 of the aircraft from Airbus Military and the first Atlas is expected to be delivered to the RAF in 2014.

Able to carry twice as much as the Hercules, Atlas can transport 32 tonnes of cargo over a range of 4,500 km, providing unprecedented capability to support the UK Armed Forces.

It can move up to 116 paratroopers, large armoured vehicles such as Mastiffs as well as vast amounts of humanitarian and disaster relief. The aircraft's ability to land on semi-permanent runways and rough ground means Atlas can fly its cargo into the centre of operations, supplying tactical forward bases or evacuating casualties or refugees.

Minister for Defence Equipment, Support and Technology, Peter Luff said: "Atlas will be a uniquely capable

#### 'A good example of how European partners can work together'

aircraft and will provide both tactical and strategic airlift capabilities for use in peace, crisis and war. The name Atlas reflects the potential of this mighty aircraft to provide help and support to our Armed Forces and others in need across the globe.

"The programme is a good example of how European partners can work

together to deliver world-class military capability."

Chief of the Air Staff, Air Chief
Marshal Sir Stephen Dalton said: "Atlas is
going to be a major capability for defence
and the Royal Air Force is looking
forward to Atlas joining our world-class
fleet of air mobility aircraft. Atlas will
offer a step change in the Royal Air
Force's capability and with its significant
payload it will be able to transport every
type of UK Protected Mobility Vehicle
directly to where they are needed as
well as supporting forces on the ground
through significant tactical air drop.

"Atlas together with the C-17 Globemaster, C-130 J Hercules and the new Voyager aircraft, now entering service with the RAF, will give us the ability to rapidly move people and equipment around the globe for military and humanitarian operations for decades ahead"

The UK is one of seven nations who will be purchasing Atlas from Airbus Military. The development and build of the aircraft has created or secured work for 8,000 people in the UK.





## Herrick's unsung heroes

#### Military Working Dogs provide valuable capability to British patrols on the front line. But procurement by DE&S begins many miles from Afghanistan

They may be man's best friend, but nowhere is that more true than on the front line of Afghanistan, where they are proving their worth saving a host of lives.

Military Working Dogs have seen their profile rise as they become more successful in sniffing out threats to British servicemen on patrol in Helmand Province

Dog handlers are specialists; so are the members of the team charged with procuring them. It's not just a case of popping down the local dogs' home for an animal which will eventually have to work in the sand and dust of Afghanistan.

The five-strong team – "We all worry every day about all things 'dog!'," said programme manager Lieutenant Colonel Mike Purnell of Force Protection Delivery Team – took on the task of bringing greater coherence to procurement and support of dogs across DE&S a couple of years ago. Members now scour the globe, talking to specialist companies, choosing suitable dogs, concluding contracts and putting support networks into place.

Operational Requirements, used to locate Improvised Explosive Devices (IEDs) in support of specialist search teams and dismounted patrols. Future inclusion in the core equipment programme is the aim.

"Because things used to be done so quickly we probably paid more than defence traditionally would pay for dogs. So we have taken a whole capability approach," said Lt Col Purnell.

"We have not just bought the dog; we have bought the whole support package from leashes, to a first aid kit for the handler, to all the kennelling for the dogs to live in. We have worked with other delivery teams across DE&S (kennelling through Expeditionary Campaign Infrastructure, first aid kits with Medical and General Supplies, food through Defence Food Services), effectively conducting the orchestra of teams rather

than playing all the instruments; the sheet music though, the requirements, are all ours. We have been responsible for the project management."

The team's buyers look for dogs between 18 months and three years old who will already have had some training.

"We don't specify a breed but the majority are typically Belgian Malinois or Labrador Retrievers," said Lt Col Purnell. "With these dogs we also bought handler training where the handler will be locally trained with the dog. Then we'll ship them back to the UK and eventually on to Afghanistan. We are in the process of establishing that type of capability in the UK which will reduce any outside reliance. That will set ourselves up for moving into the core programme."

As Operation Herrick has progressed the dog has become as important as any of the other more high-tech means of detecting threats. Lt Col Purnell said: "It is a key-lifesaving capability and a key part of force protection for a patrol. Troop numbers will be withdrawn from Afghanistan in the next two years quicker than dog numbers. The dog will have a role in Afghanistan right to the end."

The team has developed new skills while carrying out its role. "I am an engineer. I don't have a dog background so I have had to learn," said the Lieutenant Colonel. "As a team we have come from a variety of backgrounds and we have all learned quickly. It's an emotive subject too. You would not normally describe the dog as equipment and people get very upset when you describe it as such. The dog is an animal, and it has equipment around it to support it."

Welfare of the dog is key. "There is a range of kennelling available and we put the dog in the best kennelling the particular location can accommodate," said Lt Col Purnell. "They don't live with their handlers; they are not pets, they are working dogs. We have invested in the best first aid which is available at forward locations. Full vet support is available at Camp Bastion and the dogs go through the same evacuation chain as the soldiers. They will be evacuated to the Defence Animal Centre, if necessary, which is the final link in the chain.

"We don't take short cuts on animal welfare.

"We think they are great dogs and it is marvellous to watch them doing their work."





## Creating incentives to satisfy defence demand

Industry is a critical component of military capability. Its people, its products, its services equip, transport, protect, clothe, feed, support our Forces.

Some companies have a global presence – others are smaller firms based just here in the UK. Thanks to industry innovation – and strong partnerships – our Forces have superb kit. It is the best they have ever had. And as good as can be found anywhere in the world.

We value industry highly, but it is not a united industrial base as such. Its diversity is its strength.

Technology is driving fundamental change in our supply chain. And smaller companies are often the ones proving to be innovative and agile. That's why we are looking for greater Small and Medium Sized Enterprise involvement in our procurement strategies. So we will also hard-wire this approach into the reformed DE&S and its harder-edged relationship with the MOD customer.

The old phrase 'sovereign capability' can lead to some pretty woolly thinking. The Defence Industrial



#### Two years into his portfolio Minister for Defence Equipment, Support and Technology Peter Luff outlines the progress DE&S and industry have made and what lies in store

Strategy of 2005 listed the capabilities industry had and what Government would do to protect them. This allowed everybody to claim that their capability was essential and that, implicitly, the MOD would have to fund it.

In contrast, our White Paper "National Security Through Technology" sets out an approach that starts with what the State needs for its security and then it looks at the different ways of achieving it, establishing affordability, what it will acquire, and how it will acquire it.

We will buy equipment in a way most suited to its type and our need for operational advantage and freedom of action.

But the skills and resources to deliver operational advantage and freedom of action will be safeguarded when we must do so to protect the nation.

Having operational advantage and freedom of action in the future depends on investment in the right technologies now

That is why we are constantly assessing what we believe are critical technologies – and why our decision to protect the Science and Technology budget from further cuts is so important.

It will be for the Government to determine how best to sustain the technology – perhaps, for example, by collaboration with one of our most trusted allies rather than by maintaining a single UK source.

Of course it's good when Britishbased companies win UK defence contracts. Often our needs will mean buying British from single sources; 40 per cent of our defence equipment and support budget is spent that way. And much of the remaining 60 per cent is also won by British companies too.

Look at announcements we have made recently – on Sea Ceptor, Sea Viper, the Core Production Capability, the refit of *HMS Vengeance*, maintaining Hercules, the Warrior Capability Sustainment Programme, Foxhound, Scout. Hundreds of highly skilled jobs secured by our acquisition and support decisions.

But the only reasons for the MOD to go out of its way to protect technologies are operational advantage and freedom of action.

One of our challenges in implementing the White Paper is driving exportability into our requirement setting process from the beginning.

It means making defence equipment that the UK requires attractive to potential overseas customers. That brings benefits to the MOD and to industry.

Ensuring this issue is fully addressed as we devolve responsibility to the front line commands is a major White Paper implementation task.

Commitments to science, to exports, and to SMEs are new. Sometimes they mean working more closely with our allies on acquisition – on very large programmes like Joint Strike Fighter with the US and international partners; on smaller-scale programmes such as aspects of counter-IED technology with the Germans – as I saw at DVD when I met MineWolf Abacot; or across a wide portfolio of programmes in the framework of the wide-ranging Franco-British agreement. Here we are working on complex weapons, unmanned combat systems, support for A400M, and much more.

Our policy will, more often than in the past, lead the Government to open up our defence contracts to international competition – as the last Government judged it right to do.

Recent history shows there is no reason why UK companies should not win MOD business. Look at Foxhound – an excellent example of an agile and versatile vehicle, a contract competed for and won by British companies, Force Protection Europe and Ricardo, sustaining around 750 highly-skilled jobs across the UK. And with huge export potential too.

Similarly, the Warrior Capability and Sustainment Programme – which will create and sustain around 600 British jobs – was won by Lockheed Martin UK in a competitive process.

And it's also the case that big



contracts awarded overseas will also help to open up those international markets to British companies.

The MARS tankers are a case in point. I would have preferred it if there had been a competitive British bid. But in the end there wasn't. The build contract has been awarded to Daewoo Shipbuilding and Marine Engineering of South Korea, but the ships are designed by a British company, BMT.

MARS means UK companies have the chance to show their potential to one of the world's largest shipyards and for Daewoo to get first hand experience of the services and products that can be provided cost-effectively by UK companies.

That means additional opportunities for the British marine engineering industry. Of equal significance is the potential of opening up the Korean defence market for other UK companies as the strategic relationships created through MARS develop.

We have recognised we've got to change and drive forward a new culture across the MOD. That means changes ahead at DE&S and in the way we do business. Work is still underway as decisions are being made. However, we are determined that the MOD will be a better informed and more demanding customer.

We must think more about defence and security as a continuum. We must think more about technology, the way it is changing and what we need to protect the State. And we must nurture the growing diversity of what once saw itself as a defence industrial base but is now a complex supply chain.

Our objective should not be to protect a defence industrial base. It should be

to create the right incentives to grow thriving, vibrant companies that can compete globally and supply defence in the UK with what we need, when we need it, at a price the taxpayer can afford."

■ Mr Luff, Minister for Defence Equipment, Support and Technology , was speaking at the Royal United Services Institute, London

Mr Luff: 'Companies have to be competitive. Growth will be hard won. We will only be able to export something if it is competitive.

'So how do we get there?

- We build in exportability;
- We support UK companies in export campaigns;
- We invest in the right technologies;

- We allow SMEs the space to flourish;
- We protect our operational advantage and freedom of action;
- We focus on building and retaining competitive advantage;
- We collaborate more with our closest partners;
- And crucially, we always remember affordability.'





Safety first: Portsmouth, above, and the other naval bases have a good safey record, says Commodore Paul Cunningham, pictured right

Commodore Paul
Cunningham is head of
Logistic Services, with
responsibility for 2,000
DE&S people across
more than 20 sites
including Germany.
Proper leadership is
key in bringing about
improvements in
safety, he says

OOD SAFETY Leadership is about reinforcing simple messages and showing people

A key aspect of Safety Leadership is about getting out and talking to people where they work. I've spent the last year trying to do just that. It has been rewarding. Ultimately, safety is about stopping accidents; nearly all accidents are preventable and occur due to human error.

My big campaign is to increase the number of 'near miss' reports we submit. In a safety conscious organisation you shouldn't have many accidents, and you should have more near miss reports.

Most people can probably think of a time where either at home or work they will have said: 'Oh that was lucky, I could have had an accident there' but then failed to take any steps to reduce the risk of it happening again.

My message to staff is: don't walk away from a near miss; recognise it as such and do something about it. It's important we don't get bogged down by the reporting process and this is one of the areas that I and my site managers are trying to make easier for our staff.

Naval bases, particularly nuclear bases, rightly have a good safety culture. They have the same number of accidents as my organisation but a lot more near misses reported. If our near misses are not reported, an accident could happen to someone else.

I am keen to keep my visits going. Showing my staff I care about their safety, expecting my managers to care about safety and delivering simple safety messages is crucial in trying to improve the safety culture within Logistic Services. It's something we haven't been very good at in the past.

We have a lot of truck and mechanical handling equipment drivers within Logistic Services where most of our accidents occur. Those of us who drive

particularly
those who
passed their
driving test
a long time
ago, will
acknowledge
that bad
habits
may have
developed.
I hope to
employ
a driver
assessor



monitor truck driving to make sure they are undertaken in a safe manner and that drivers are thinking about everything they have been taught.

People are talking about safety and near miss reporting at all levels now which they weren't doing a few months ago. We have also seen improvements in our accident statistics and our near miss reporting so I would like to think that my talking to staff has made an impact.

Safety Leadership is about reinforcing simple messages, being passionate about safety and being seen to demonstrate that I care. I urge everybody to be a bit more safety conscious."

'Showing my staff I care about their safety, expecting my managers to care about safety and delivering simple safety messages is crucial'



#### Team aims to set standard for working partnerships

A JOINT team from Architecture Design Authority inside the Defence Information Services team has begun work with Microsoft to achieve BS11000 certification by next March.

For Microsoft this will be the first time the company has undertaken BS11000 work.

As well as improving BS11000 engagement, demonstrate commitment of both parties to the relationship.

Microsoft provides software support for 180,000 workstations across the MOD worldwide and also supplies support engineers and specialists covering the main Microsoft products used by the MOD.

Microsoft assures and derisks information infrastructure in the MOD through a strong relationship between orgnisations.

The joint team is being assisted through this process by Mike Rogers from the MOD Private Finance Unit/Partnering Support Group, while Brian Dubrie (DIST leader) and Nick Corrigan (Microsoft Director Premier Support) are sponsoring the programme. Accreditation will endorse collaborative work started more than seven years

ago when the MOD Defence Information Infrastructure formed.

DIST - based at Corsham formed on 2nd April 2012 and brought together services formerly delivered by DII Group, Application Services Team and elements of Integrated Service Provider.

Mr Dubrie said: "This process will take around 12 months to complete, but it builds on a fruitful relationship already developed between MOD and Microsoft and I look forward to taking this forward for mutual benefit."

#### Herc passes another milestone

DE&S' HERCULES TriStar team has achieved another milestone in the transition of tactical air transport capability from the Hercules C-130K aircraft to the more modern C-130J.

Release to Service for operational low flying means training can begin for this important contributor to the UK's standing overseas commitments.

This is the culmination of ten months' hard work by the team and the RAF's 206 Squadron.

The project has included planning, clearance to conduct trials, conduct of the trials in the UK and overseas, post-trials analysis and reporting, safety analysis and compilation of the Release to Service submission.

Hercules TriStar and the Air Warfare Centre have worked to minimise the amount of contractor support needed for this capability.

Impact on operations has been minimised by flying many of the trial sorties on an opportunity basis, such as when a C-130J was transiting from the UK to the USA for another trial.



Lorica Systems UK Ltd, The Airport, Newmarket Road, Cambridge CB5 8RX Tel: +44 (0) 1223 373737 Email: contactus@loricasystemsuk.com

www.loricasystemsuk.com



## Forward with Gary Corsham sends its first civilian

## Corsham sends its first civilian to co-ordinate Operation Herrick communications systems

CORSHAM-BASED Gary Cotter is back in the UK after being the first civilian posted to Camp Bastion to fulfil the critical role of 'ISS Forward' on Operation Herrick

He deployed earlier this year for a threeand-a-half-month tour, joining the Joint Force Communication Information Systems (Afghanistan) team which manages the various comms systems for coalition forces.

DE&S' Information Systems amd Services at Corsham has historically provided three military posts to deploy and represent the organisation by influencing key operational decisions.

While deploying civil servants is not new with a large number going as part of surge teams to deliver communcations systems such as the recent Kestrel installation, ISS Forward is a high-profile, key role that leads the many surge teams and contractors in theatre as well as championing DE&S and influencing theatre planning.

"Using the 'Support-2-Operations' banner, I was able to join our structured joint military/ civilian augmentation plan covering these ISS posts," said Gary.

"Having the right skill-set at the right time I was programmed to deploy on Herrick 15. As I was already a member of the ISS Operational Plans Team, which acts as the focus for operational matters in ISS, I jumped at the chance!"

Gary was the only civilian in the team. "I was very well looked after by the JFCIS(A) team, including members of 1 Armoured Division Signal Regiment, the Campaign Signal Regiment, who considered me part of their wider, fully integrated team," he said.

"It was a winter tour, so it was mainly cold, with some snow, lots of rain and sand storms. However, the most daunting element for me was realising I was responsible for in excess of 70 members of ISS staff, including military, civil servants and delivery partners, while they are in theatre.

"That said no two days were the same. I recall having a major service outage going on, a compassionate case with a delivery partner, the hospitalisation of a member of a surge team – nothing serious, thankfully – followed by a strategic planning meeting with the JFCIS commander, all happening within a day!

"The benefit of being able to complete a deployment and then bring back all the experience gained into the ISS Ops Plans team, which is focused on operations, is huge. I am grateful for the opportunity and the support I received from within the team as well as all the members of JFCIS(A)."

Group Captain Tom Devlin, Commander JFCIS(A), added: "ISS is one of our prime agencies supporting operations and Gary's sterling efforts ensured that this essential relationship has been further improved during his tenure in theatre."



Above: a 50-metre mast provides a number of communications services to Camp Bastion and beyond. A well-known local landmark

Left: Gary Cotter at Camp Bastion

#### Loco honours historic aircraft



makes a pass over

the locomotive

THE RAF's Battle of Britain Memorial Flight has been honoured by having a railway locomotive named after it.

The electric engine, no 91110, operates on the East Coast Main

Equipment support for the flight, which includes a Lancaster bomber, Spitfires, Hurricane and Dakota, is carried out by DE&S' Fast Air Support Team.

The locomotive achieved a UK speed record for electric trains of 162 miles an hour in 1989 – a record which still stands.



MICE HAVE taken over Abbey Wood – to help show DE&S staff the value of learning and sharing experiences and knowledge.

They portray what the DE&S Champion for Learning from Experience (LFE) has called a vital message for DE&S staff: That it is OK to ask and it's OK to share.

To promote this the LFE Implementation Team has arranged events to raise awareness and demonstrate the work being done to improve the way lessons are captured and shared across DE&S to enhance delivery of capabilities to the Armed Forces.

The team has held a live demonstration of the LFE Portal – guidance, tools and help available to staff – accessed via the DE&S homepage.

The DE&S LFE Strategy was launched at the start of the year and highlights the value of learning from

each other. LFE is important because learning is something staff do all the time. A new experience or building on what is already known adds to existing knowledge about effective and efficient procurement of capability.

Sharing this knowledge with others ensures that good practice – things that have been found to work well – is exploited across DE&S. It also helps project teams avoid potentially repeating things that have been found to work less well. Sharing and exploiting information and knowledge is essential to DE&S.

DE&S leaders - Chief of Materiel (Land) Lt Gen Chris Deverell is the new LFE Champion for DE&S - are urging staff to take on board these vital messages.

Each operating centre and functional area has an LFE Champion to encourage good behaviours and practice.

The LFE team will take awareness events to each neighbourhood at Abbey Wood North and South along with Corsham and other DE&S sites

Corsham and other DE&S sites. Find out who LFE Champions are by visiting the LFE Portal on DII: DE&S Homepage - Tools and Applications - LFE Portal.

## Learn from experience – take your lessons from the mice!

Chief Petty Officer Stephen Maclennan gives Commodore Mike Mansergh and guests a run-down on firearms training. Right: members of the project team and guests attend the opening ceremony





THE PUMA 2 Gazelle (P2G) team, left, has seen what its efforts deliver to the Puma fleet at RAF Benson. Gp Capt Malcolm French, P2G leader, said: "This experience has had a hugely positive impact on my team, being able to see how their individual day-to-day efforts contribute to the wider platform capability and operation.

#### Clyde firearms training is right on target

MILITARY PERSONNEL and MOD Police have a top-of-the-range facility at their disposal with a new firearms training centre at Clyde naval base.

The £3.8 million facility will give Royal Navy, Royal Marines, MOD Police and Reservists the best possible instruction.

Equipped with a giant firearms simulator the centre can replicate a variety of scenarios, allowing trainees to practise responses in a safe environment.

Projectors beam simulation onto one wall of the giant room, with the trainees taking up positions at the opposite end with their specially adapted firearms.

The centre, which took 16 months to build, is fitted with cinema-style seating so students can watch and learn from their mistakes.

Chief Petty Officer Stephen Maclennan, the officer-in-charge of the centre, said: "In my 24 years as a Gunner this is the best firearms training facility I have come across."

Elaine Hamilton of the Defence Infrastructure Organisation, said: "A lot of hard work and careful management has gone into the creation of this facility. To see it through from start to finish offers us an enormous sense of satisfaction and to witness the simulator in use at the opening was fantastic."

#### Clyde choir hits all the right notes



THE WEST of Scotland Military Wives Choir could soon be topping the charts after Decca Records recorded their performance for an upcoming album.

Thirty-two
members of the
choir – all wives and
partners of serving
military personnel
– gathered at Clyde
last month to record
14 tracks for the
major record label.

All but four of the wives have husbands based at Clyde or attached to one of the submarines based there. Profits from their work will go to the Military Wives Foundation.

Choir founder
Joanne McMurdo
said: "We work
closely with the
foundation and they
asked a while ago
if we would like to
record a second
military wives
album."

The album should be released on 14th November.

Joanne added:
"I watched the BBC show *The Choir* and was inspired to form a West of Scotland branch," said Joanne.

"My husband,
James, is a Royal
Marine and at the
time he was deployed
to Afghanistan. I
felt that, as well as
being good fun, the
choir would be a way
of meeting other
military wives and
forming a support
network.

"It's really grown from there, mostly by word of mouth, and we have 48 members of the choir at present."

Practice makes perfect: for the West of Scotland military wives

#### Forces wow Plymouth crowds

AROUND 30,000 people showed their support for service personnel at the Armed Forces Day 2012 national event in Plymouth.

The Earl of Wessex, representing the Queen and the Royal Family, took the salute as a parade of more then 1,200 service personnel, veterans and cadets marched through the city streets and onto Plymouth Hoe on 30th June.

A drumhead service paid tribute to Armed Forces past and present which was ended by a flypast of World War Two Hawker Sea Fury aircraft from the Royal Naval Historic Flight.

Type 23 frigate *HMS Argyll* performed a steampast through Plymouth Sound and fired a 21-gun salute.

Following HMS Argyll was the Royal Fleet Auxiliary ship Mounts Bay, filled with children from local schools and their families, as members of 29 Commando Regiment Royal Artillery fired a salute on behalf of Plymouth from the battlements of the Royal Citadel. RAF Typhoon aircraft and the Red Arrows concluded the day.

Alongside the celebrations in Plymouth, more than 200 events were held as part of Armed Forces Day across the UK.

## MOD graduates get young engineers up to speed

CHILDREN FROM eleven primary schools across Bristol have taken part in a project run by graduate trainee engineers from the MOD's Defence Engineering and Science Group (DESG).

Each year, a graduate development project is organised for new graduates to engage in. This year more than 70 trainees have worked with local schools to encourage interest in science, technology, engineering and maths.

The schoolchildrens' task was related to the 'Bloodhound' project which plans to set a new world land speed record next year. Children had to build their own fast cars facing tough engineering challenges but on a scale suitable for their age group.

The graduates' role saw them go into the schools to be interviewed by Year 6 children about what life as an engineer is like. Graduates helped children design, build and test their cars.

The teams with the fastest cars attended a prizegiving at the University of Bristol where they raced their cars against the other schools, were interviewed by MOD engineers and also took part in an engineering challenge to build the tallest tower.

Rod Drake, who leads the training scheme, said: "This was a hugely rewarding and enjoyable event for all who took part. With the aim of inspiring our next generation of engineers, it was



Above: Rod Drake (head of DESG) and Simon Pearson (mentor) question Ashton Gate pupils about the challenges of building their car

Right: graduate Amy Austin advises on building a spaghetti tower

heartening to see schoolchildren really engaged and excited about engineering.

"It is always a challenge for our graduates to fit this sort of project around their busy DESG training schedule and placements. But I'm pleased to say they all rose to this challenge."

Susan Scurlock from the charity Primary Engineer added: "The children were enthused not just by the project, but by the engineers taking part. We are really proud of the way the DESG graduate engineers have worked with the schools."

The DESG Graduate Scheme supplies the MOD with sufficient number and quality of graduate engineers and scientists and trains them for their career.

The scheme enables each graduate to get the most from training courses and work placements within the MOD and industry. Each graduate gains a breadth of MOD engineering experience in readiness for their first professional posting and furthers professional development making it possible to achieve chartered status in just four years.



Lesley and Billy are pictured in the centre with fellow recipients Kenny Woods and Paul Ellis.

A WAREHOUSE assistant at Coulport and a civilian worker at Clyde naval base are among four Royal Naval Reservists honoured for outstanding

Lieutenant Commander Lesley Stephen is head of logistics at HMS Dalriada in Greenock and served as the unit's Executive Officer from 2007 to 2011.

She has served in Oman, Estonia, Italy and on many large scale Nato exercises. She has managed to fit this around her job as a civilian at Clyde and as mum to a young family.

Petty Officer Billy Somerville, who works

#### Reservists earn rewards

at Coulport, has served for eleven years in the Reserves where he is a logistics specialist.

PO Somerville is also HMS Dalriada's sport and fitness instructor in Greenock, keeping men and women of the unit in top physical condition.

Both received certificates of meritorious service in a ceremony at Paisley Town Hall alongside two other reservists from HMS Dalriada which is home to more than 70 Reservists from the west coast of Scotland.

THE CHIEF of Defence Materiel's Private Secretary led the way in Abbey Wood as the UK's Reservists joined full-time colleagues proudly wearing their uniform to work.

Dr Ben Williams joined thousands of Reservists across the country - from gardeners to accountants - by swapping his usual suit for camouflage clothing at work on 27th June. He is a Medical Support Officer with 243 (Wessex) Field Hospital in Keynsham.

"I was commissioned in 2004 and was motivated to become a Reservist as I was working for the MOD as a civilian and wanted to do my bit," he said.

"I am a pharmacist by trade and this was very sought after within the military so I joined up on that basis.

"During my time as a Reservist I have done a tremendous amount of training and learned a great deal about how to save lives. And there has also been the opportunity to develop my general military skills."

Dr Williams spoke of his pride at being involved in the Territorial Army.

"Years ago some people looked down a bit on the TA but the military are very supportive

of the Reservists and us as an integral part of the Armed Forces. My colleagues the military around

## starts at the top

Abbey Wood are pleased to see me in a uniform today rather than a suit.

"The TA has been very flexible and understands the pressures of working somewhere like the MOD and knows when I am available to train. They are very tolerant and a fantastic institution."

Defence Secretary Philip Hammond said Reservists are vital part of the Forces. "As we reshape our land forces to face future threats, the Reserves will be playing a much larger role with increased training, equipment and deployability," he said.

Major General, the Duke of Westminster is Deputy Commander Land Forces and the most senior Army Reservist. He added: "Reservists come from every walk of life, from communities up and down the country, and people should feel proud to show their support for them. Employers of Reservists should also be proud to show their support."



#### **Service** lands **US** honour

AN RAF air commodore has been awarded a prestigious military decoration for his Afghanistan service.

Air Commodore Colin Basnett, head of the Capability Equipment Plan, was presented with the United States' Legion of Merit by General Norton A Schwartz, Chief of Staff of the US Air Force.

The Legion of Merit is awarded for 'exceptionally meritorious conduct' and is endorsed by the President of the United States.

Air Commodore Basnett won the award for his work as Director of the Combined Air and Space Ops Centre from May to September 2010.

#### **Devonport tribute** to submariners

THE SUCCESS of a former nuclear-powered submarine as a visitor attraction has been marked with the unveiling in Devonport of a tribute to submariners who died serving their country.

The former HMS Courageous opened as a museum ten vears ago.

A ceremony was staged on 12th July in the submarine at the Devonport base to unveil a memorial board on the jetty listing all Royal Navy submarines lost in war and in

Launch of the board was conducted by Commodore Jake Moores, who



Above: Commodore Jake Moores unveils Devonport's tribute

commands the flotilla of Devonportbased operational ships. Cdre Moores, served in Courageous in 1986-87.



Winners of the netball and soccer tournaments along with the people who made it possible, far right

ABBEY WOOD staff showed their usual prowess with a host of titles in the Defence Sports and Recreational Association's annual sports day at Bath.

Netball, archery, volleyball and tug of war were among the competitions won by staff from DE&S headquarters as hundreds enjoyed another excellent sporting event.

The women of Abbey Wood's Laurels sports club A team took the netball title with victory over a team from QinetiQ while a Bath team triumphed over Vector Chinook of Gosport in the men's soccer with Abbey Wood's A team taking the women's event.

And there was a title for Abbey Wood's A volleyball team with the Defence Geographic Centre of Feltham finishing second.

In the tug of war Abbey Wood swept the board with the Bashers edging out the Desperados into second place.

Among individual winners were clean sweeps in the Compound Champion archery event – Robin Jarvis and Kay Smith earning the top places – with Caroline Brunt of Corsham and Mike Hudd of Abbey Wood winning the mixed doubles tennis.





#### Above and beyond the call



CYCLISTS from DE&S Ships have found themselves pictured across the hospitals of Bristol, thanks to a charity fundraising bike ride last year.

Civilian and Royal Navy staff from Abbey Wood and Devonport cycled from Plymouth to Bristol for the charity Above & Beyond, raising cash for the Bristol Haematology and Oncology Centre. The ride raised £6,306 for the centre.

Now pictures of the cyclists have been reproduced on a poster, which can be seen in all nine of the city's hospitals supported by the charity.

"It was a very successful event," said Kevin Barry of DE&S Ships. "Hopefully we will do something similar again for the charity in the future."

Lorna Clarke of Above & Beyond said: "The support of Kevin and the team has just been fantastic and we are delighted to be able to include their photo in our new posters that will be displayed across Bristol's city centre hospitals.

"Every year we need to raise more than £3 millon to buy cutting edge equipment, fund research, support staff training and improve hospital environments. I am sure this poster will inspire more people to fundraise for our hospitals."



#### **Director - Commercial Operations**Defence Equipment and Support



#### Ministry of Defence – Director DE&S Commercial Operations circa £130,000 plus performance related payment - Bristol

The Ministry of Defence is the government department responsible for implementing defence policy and running the armed forces. The Commercial roles in the organisation lead the purchasing, procurement and contracting activity for MOD's external spend of £22bn, by far the largest in UK Government, rivalling the largest private sector companies and covering a huge range of complex acquisition.

Defence Equipment & Support is the division of the MoD that equips and supports the UK's armed forces for current and future operations. It operates on a vast scale - employing around 17,000 people, with a spend of some £20 billion and placing c 6,000 contracts a year.

We are currently looking to appoint to an extremely high profile and important commercial post. This represents one of the most exciting and professionally stimulating procurement challenges in the UK. A career-enhancing and career-defining role which would suit the most ambitious and capable procurement professional from either the Private or Public sector.

Reporting to the MOD Director Commercial, this is the pivotal role in leading the commercial activities of DE&S. You will apply best practice mentoring to all the commercial activity in the DE&S, review performance and suggest areas for improvement. You will also engage with a wide range of external stakeholders to promote and enhance the reputation of the organisation.

We are looking at individuals with substantial leadership experience, managing teams of several hundred people, with heavyweight procurement experience and a proven track record of managing multi-billion complex spend and major suppliers.

For more information please visit our dedicated microsite at www.hays.co.uk/jobs/commercialdirectordefence

Or contact either David Hazeldine or Andrew Timlin from Hays Executive on 020 72598743 or email david.hazeldine@hays.com

Closing Date 13th August 2012

The Ministry of Defence is an equal opportunities employer.

#### **HAYS** Executive

#### S - 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:

**2012DIN04-102:** This draws attention to all service and civilian personnel who dispose of surplus scrap metal and lead acid batteries, to the DSA's renewed contract for the complete recovery and recycling service for scrap metal and lead acid batteries which includes provision for secure (demilitarisation) disposal.

**2012DIN04-096:** This publicises the 2012 Minister for Defence Equipment, Support and Technology's Acquisition Awards and informs those involved in acquisition across the MOD on the procedure for nominations.

**2012DIN04-098:** In 1990 a number of Wolf Land Rovers were modified so they could be converted if required to weapons platforms by fitting Weapons Mounted Installation Kit (WMIK). Over a number of UOR projects the design of WMIK platforms has changed considerably with the weapons mount becoming permanent fits. Phase One modification is no longer relevant and asset codes are now declared obsolete.





#### **Ministry of Defence Senior Commercial Roles**

The Ministry of Defence is the government department responsible for implementing defence policy and running the armed forces. The Commercial roles lead the purchasing, procurement and contracting activity for MOD's external spend of £22bn, by far the largest in UK Government, rivalling the largest private sector companies and covering a huge range of complex acquisition.

We are currently looking to appoint a number of extremely high profile and important commercial posts. These are some of the most exciting and professionally stimulating procurement challenges in the UK. They are career-enhancing and career-defining roles which would suit the most ambitious and capable procurement professionals from either the Private or Public sector.

#### Defence Equipment and Support (DE&S), Bristol

DE&S equips and supports the UK's armed forces for current and future operations. It operates on a vast scale - employing around 17,000 people, with a spend of some £20 billion and placing c 6,000 contracts a year.

#### Operating Centre Heads of Commercial (SCS I) (up to 8 Posts) Circa £100,000 + performance related payment

These roles take responsibility for leading the Commercial delivery of major projects within the different Operating Centres, each covering areas such as ships, aircraft, armoured vehicles, missile systems, information systems, telecoms and high volume military commodities. You will develop best practice and provide professional leadership to c100 commercial staff, raising standards and capability. You will lead on complex negotiations and embed relationships with key suppliers.

We are looking for individuals with leadership experience and exposure to substantial procurement projects, who can demonstrate ability to purchasing highly complex goods & services and sourcing within niche markets.

#### Heads of Commercial without portfolio (SCS I) (up to 3 Posts) Circa £100,000 + performance related payment

These posts are responsible for providing flexible resource, leading the commercial delivery of major projects by providing expert commercial skills to supplement existing personnel. This may involve post holders being dedicated 100% to a single specific major initiative or providing input to a number of parallel projects.

#### Defence Infrastructure Organisation (SCS I) (Sutton Coldfield, Huntingdon or Andover) (2 Posts) Circa £100,000 + performance related payment

The Defence Infrastructure Organisation manages the military estate and property function, the 2nd largest estate in the UK with c £30bn of assets and c £3bn annual expenditure.

The Head of Commercial Operations manages the I50 commercial staff throughout DIO and leads engagement with DIO key suppliers and where necessary directly involved in complex negotiations or disputes. The Head of Commercial Business Partnerships plays a key part in the negotiation of the proposed transfer of DIO operations to an external partner.

For both posts we are looking for individuals with significant leadership experience, and strong procurement experience at a senior level in a substantial estates or property function.

For more information please visit our dedicated microsite at www.hays.co.uk/jobs/defence

Or contact either David Hazeldine or Andrew Timlin from Hays Executive on 020 72598743 or email david.hazeldine@hays.com.

#### Closing Date 13th August 2012

The Ministry of Defence is an equal opportunities employer.





Premier service: on the conning tower of HMS Victorious - Cdr John Livesey, Engineering Technician Paul Millea and Engineering Technician Craig Breeze

SOCCER'S PREMIER League Trophy has paid a visit to Clyde naval base.

Mike Summerbee and Paul Lake, former players and now ambassadors of champions Manchester City, brought the trophy to the base after hearing that nuclear submarine HMS Victorious' commanding officer Commander John Livesey was a lifelong fan.

John and his crew were on patrol as the nail-biting finale of the league was played out on 13th May.

"It is an important morale booster when we are on patrol," explained Commander Livesey, originally from Cheadle in Greater Manchester. "There are even lads on the submarine who keep league tables as a way of occupying their free time at sea.

"I was shocked when I got the call. They said we should meet up and I thought they were going to present me with a signed football top or something. I never imagined they would be coming to Faslane with the Premier League trophy."

Mike Summerbee added: "It was amazing to get on board and see some of the work that the crew does. It is a difficult job that the lads perform, going to sea for months at a time, but it is good to know that they have the morale boost of following the Premier League."

Dozens of service and civilian personnel joined Navy physical training instructors at Clyde's Sportsdrome fitness facility late in the afternoon to see the cup close-up.

#### Mike proves fuel safety is better by design

DESIGN WORK on motorcycle fuel tanks by a DE&S technician has kept British interest in the World Endurance Championship on track.

Abbey Wood's Mike Wain supports the Honda TT Legends team in the championship.

And he had his work cut out after serious crashes in an event in April revealed safety issues with the CBR 1000 Fireblade's fuel tanks.

Mike, who works for the AS90 and Terrier joint project team, designed and implemented modifications to improve structural integrity of the tanks during crashes.

"The challenge was to prevent the quick filler valves from puncturing the underside of the tank in the event of the bike landing upside down," he said.

One tank was too badly damaged to be repaired in time but Mike was able to set off for Round 2 of the championship in Qatar in June with three modified and repainted tanks, just sufficient to run the race and spare motorcycles.

During qualification rider Michael Laverty crashed and the tank survived with just a small dent to show for it. Then Michael, Riyuchi Keonari and Jason O'Halloran rode the CBR1000 Fireblade to third place, the British team's first podium in World Endurance. The result lifted them to second place in the World Championship.

Mike added: "The pace of change in top level motor sport is incredibly fast in comparison to the defence industry so there is plenty to learn on how to implement design change quickly.

"It was great to see the reinforced tank survive a crash still fit for use, but even better to see the British flag back above the podium again!"



Just champion: Mike, above, on the starting grid with the Fireblade

Left: Mike gives the Fireblade its final shot of fuel during the eighth hour of a



#### Geoff caps **England** triumph

DE&S' TOP orienteer Geoff Ellis has earned himself his first national cap in helping England to victory in a veterans' home international competition.

The RAF flight lieutenant, above, who is based at Corsham, took the RAF Inter-Services and Combined Services titles last year and won the British sprint championship earlier this year.

And he continued his form in the M35 class for men aged 35 to 40 in the Mourne Mountains of Northern Ireland in June.

Geoff finished second in the individual event behind Northern Ireland's Marcus Pinker, while being pipped for victory on his leg of the relay at the hands of Scotland's Roger Goddard by only two seconds.

Further successes by his teammates however saw England crowned champions with victory in both the individual and relay events.

