July 2013 Issue 62 the magazine for defence equipment and support







New Defence Finance and Military Capability wallchart See inside













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A line-up of Husky vehicles joins others as DE&S' annual stakeholder event, DVD, celebrates ten years at Millbrook in Bedfordshire. The event has signalled a new future direction for the Army as DE&S continues the process of redeployment from Afghanistan

desider

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Bernard Gray

Chief of Defence Materiel

'Work on both potential models is now pushing ahead strongly following the launch of the assessment phase'



I was privileged to be able to sit in the House of Commons to watch the Defence Secretary, Philip Hammond, setting out to MPs the reasoning behind the Materiel Strategy programme as he launched the White Paper "Better Defence Acquisition: improving how we procure and support defence equipment".

Most people who work in DE&S will probably be very familiar with many of the examples used by the Secretary of State to illustrate the manifest need for change, points that I have set out before you and discussed with you many times during the past two years.

He explained that while the Government believed a Government Owned Contractor Operated management model for DE&S was the solution most likely to embed and sustain the significant change required to reform defence acquisition, a final decision would follow an objective value for money comparison with the DE&S+public sector model.

I can tell you that work on both these potential models is now pushing ahead strongly following the launch of the assessment phase on 25th April.

Following announcement of the elements that would make up a Common Resource Platform and the selection of a Chief of Materiel domain that would together go into a GOCO from day one – should that be the decision of Ministers next year – the next step will be the dispatch of an Invitation to Negotiate to potential bidders, which we currently anticipate will take place this month.

The Secretary of State was very clear with MPs on the high

costs of past inefficiencies in defence procurement – which he put at between £1.3 billion and £2.2 billion every year. He said he expected a change to a potential GOCO solution to benefit MOD to the tune of several hundred million pounds a year, which would help the taxpayer through lower public spending and the Armed Forces through the purchase of increased capability.

He also set out the need for the GOCO to be able to recruit and reward its staff at market rates and said this was a critical freedom for an organisation that would have to deal with the private commercial sector on a daily basis.

These are issues that concern us all and which I know have featured in our discussions.

The White Paper covered another important area that affects work right across DE&S – single source procurement. Reform of this area is central to the overall improvement of defence acquisition and is something that I welcome.

Finally, alongside the continued effective support that DE&S provides to operations in Afghanistan and elsewhere, I was very pleased to see that the Terrier armoured engineer vehicle had entered service, the Stingray Mod 1 torpedo insensitive munition warhead had entered service a commendable three months early and that the DVD land equipment stakeholder event, which was attended by Minister for Defence Equipment, Support and Technology Philip Dunne, was a success.

DE&S 'will meet the Mat Strat challenge'

THE MATERIEL Strategy is arguably one of the biggest and most complex change programmes anywhere in Government. Delivering it will be a huge challenge – but one that will be met, the programme director told DE&S staff at an open forum update at Abbey Wood.

Barry Burton, who was appointed DE&S Director Materiel Strategy a year ago, said the programme had moved into the assessment phase after detailed and testing scrutiny from the Investment Approvals Committee, the Major Projects Review Group and other Government departments.

The "Better Defence Acquisition" White Paper, published on 10th June, paved the way for the introduction of legislation to prepare for a Government Owned Contractor Operated (GOCO) solution for DE&S – should that be the decision of Ministers next year.

The next step in the commercial competition is an Invitation to Negotiate this month, followed by discussion with potential bidders, alongside further development of the alternative DE&S+ potential solution.

Mr Burton said: "I think potential bidders will be faced with a significant challenge and we need to help them get through it so that we have a credible alternative to put against DE&S+.

"We now have to move DE&S+ forward. We've started discussions with the MOD and the Cabinet Office about ways in which we might better run DE&S and better deliver the programme. Our colleagues in the Treasury and the Cabinet Office are engaged and are up for the debate."

Key game changers for DE&S+ included sustaining a professional workforce and being a match for DE&S suppliers.

Enablers defined for DE&S+ included a distinct culture, behaviours and processes to drive results, and a smaller, more compact structure.

In answer to questions from staff, Mr Burton said there was recognition in the Armed Forces of the challenges they would face when working with a remodelled DE&S. He said: "They recognise that this is a challenge they have to resolve.

"The Customer Design programme, led by Maj Gen Peter Fox, is charged with ensuring that the Front Line Commands have the skills, tools and structures required to interface with a new DE&S."

■ White Paper: pages 6 and 7



Terrier makes its mark in the Dorset countryside, above, with General Sir Peter Wall, inset

THE BRITISH Army has taken delivery of Terrier, its newest and most advanced engineering vehicle.

Terrier, a £360 million project with BAE Systems, was unveiled to the media at Bovington in Dorset on 4th June when it was declared in service.

The 30-tonne armoured digger gives the Royal Engineers a capability that can be used to carry out a variety of tasks, with technology so advanced it can be driven manually and by remote control from up to 1km away.

And its unveiling was a satisfying moment for members of the DE&S team.

"Delivery of the 20th production vehicle and achievement of the in-service date within the approval was particularly satisfying for the Terrier team, some of whom have been with the project for over ten years," said Project Manager Heath Wardle.

"Having a team which has been with the project through the good and the bad times has been invaluable in taking it forward. I am pleased for them that they can now reflect on their part in delivering this extremely capable vehicle and the positive feedback it is now receiving from the end user."

At the launch ceremony a fortnight previously the head of the British Army, Chief of the General Staff General Sir Peter Wall, said: "The Terrier armoured digger is excellent news for the Army. Its versatility will pay huge dividends on the battlefields of the future. We could not be happier with this new capability."

Terrier has also been attracting interest from other nations as the only medium weight vehicle with its range of capabilities currently available.

The French army has undertaken an evaluation and a demonstration of

Terrier's capabilities to senior officers which also took place on 4th June.

Warrant Officer Steve Cahill, Royal Engineers, who has trialled Terrier, said: "Terrier is a world-leading engineer support and combat vehicle which can dig holes, lift objects and drill into the ground or shatter concrete; all while being controlled remotely and providing armoured protection, top cover and smoke shields for our troops.

"Very much in line with the ethos of the Corps of Royal Engineers, Terrier is a versatile vehicle capable of taking on a variety of tasks."

The project is now focusing on delivering the remaining 40 vehicles from BAE Systems' factory in Newcastle and to complete the upgrade to the final build standard for all vehicles by next June. The final vehicle, V60, is in production and already being fitted out.



In-year management shifts towards the Army

CHIEF OF Defence Materiel Bernard Gray has joined Chief of the General Staff General Sir Peter Wall in signing 'Soft Contract 13' between DE&S and Army headquarters on 19th June.

The contract is the first step to a more formal contractual agreement between the Front Line Commands and DE&S, as defence transformation takes effect over the coming years.

The change in title from the traditional

Joint Business Agreement seeks to put a greater focus on the Commands as the customer, as they take increased ownership of the relationship with DE&S, as the deliverer, in line with increased financial responsibility.

This year will see a transition from DE&S to Army HQ for the lead on in-year management and the development of next year's agreement which will be termed Smart Contract 14.

'A step change in the way we do ou

The
Government's
White Paper on
the future of
DE&S has been
published.
desider looks
at the detail

DEFENCE SECRETARY Philip Hammond told MPs during a debate on the launch of the Better Defence Acquisition White Paper that every year between £1.3 billion and £2.2 billion was wasted due to inefficiencies in MOD procurement.

He said: "Waste on that scale is unacceptable at any time; more so at a time of acute pressure on the public finances. I am determined to drive a step change in the way we do our defence procurement business.

"We believe that a GOCO-operating

model is the solution that is most likely effectively to embed and sustain the significant change that is required to reform defence acquisition, but the decision will be based on an objective value-for-money comparison between the GOCO and DE&S+ options.

"The assessment phase is designed to deliver specific, costed, contract-quality proposals from GOCO bidders and test them against the D E & S + benchmark.

"We have
two separate
t e a m s ,
working
w i t h
Chinese
w a l l s
between
the m ,
that are
equally
resourced.
One is trying
the maximum

to build the maximum fully-public-sector case that it can, taking

advantage of all freedoms and flexibilities available. The other is working with potential GOCO bidders to look at the value that they can deliver. At the end of the process, we will make a comparison."

Other key points the Secretary of State made in the debate included:

- About 8,000 of DE&S' civilian staff would be expected to transfer to a GOCO;
- The remainder in naval bases, communications and information services would remain in Government or be outsourced in the case of logistics;
- No decision has been reached on whether the GOCO would manage the Atomic Weapons Establishment;
- Arrangements, GOCO or DE&S+, should be in place before the end of 2014.

The Secretary of State said if GOCO was the selected option, the private sector contracting entity would operate on behalf of the MOD a limited company which would negotiate and

'We would expect savings and efficiencies to be generated from the very beginning' sign new contracts on behalf of the Secretary of State as the Principal.

The proposal set out in the White Paper was for a phased transfer of DE&S to a GOCO, with checks and break

points to stop the process if it did not provide the significant benefits anticipated.

If, at the end of the assessment phase, a GOCO operating model was selected, MOD

would need to move quickly to conclude a contract with the successful bidder. The Government intended to provide in the Defence Reform Bill the necessary authorities to let a GOCO contract in 2014.

In answer to questions from MPs, Mr Hammond said of 21 expressions of interest received in response to the issue of the pre-qualification questionnaire, a third had been from UK-headquartered companies. It was likely that a winner would be a consortium and highly likely that would include US-headquartered representation.

He said plans to transfer the

Single source procurement to be reformed

Defence Secretary

Philip Hammond

MR HAMMOND said the White Paper also set out reforms to how the MOD undertakes single-source procurement of defence equipment which accounted for about 45 per cent of the total the MOD spends on defence equipment and support, or about £6 billion per year.

Without competition, suppliers could price and perform without being constrained by the disciplines of the marketplace.

disciplines of the marketplace.

He told MPs: "The MOD currently uses a framework for single-source procurement which has remained largely unchanged for the last 45 years

years,
"In 2011, the MOD commissioned Lord Currie
of Marylebone to undertake an independent

review of our existing approach and to make recommendations.

"Based on his recommendations and extensive consultations with our major singlesource suppliers, we have developed the new framework I am proposing, details of which are set out in the White Paper.

"A statutory basis will ensure widespread coverage across our single-source suppliers and application of the regime throughout the single-source supply chain.

"The system will be policed by a stronger, independent, single source regulations office to monitor adherence and to ensure the regime is kept up to date."

■ continued on page 7

r defence procurement business'

■ continued from page 6

Royal Navy dockyards out of DE&S, along with the plan to transfer the logistics and commodities supply service out of DE&S to an outsource contractor, would continue on track.

"That is why there is a gap between the projected 2015 total numbers of DE&S on a steady state basis, and the 8,000 that we are expecting to transfer under a TUPE transfer if we go down this route," he said.

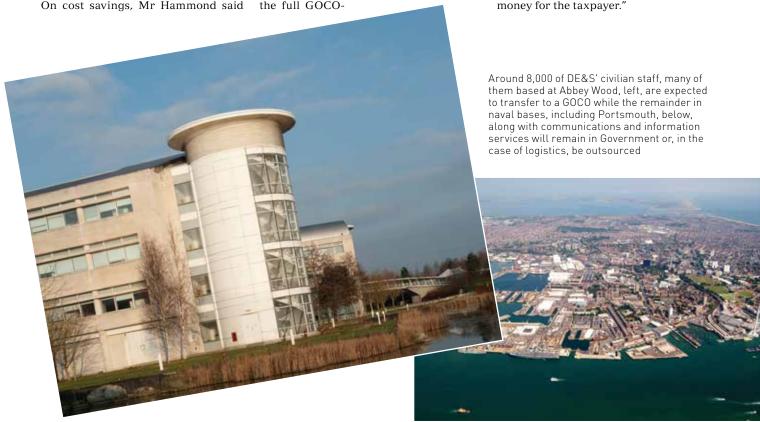
MOD did not expect to save all the £1.3 billion to £2.2 billion lost annually due to inefficiencies.

"It would be a very rash man who suggested that we can squeeze out every last pound of those, but I would expect us to be able to achieve net gains after taking account of the cost of the arrangements - the GOCO fee and the cost of the governance function on the MOD side - in the hundreds of millions of pounds.

"We would then expect there to be a two-stage process towards the full GOCO-

isation - if I may use that term - of DE&S. We would expect savings and efficiencies to be generated from the very beginning, and from the second year of operation we would expect there to be cashable benefits."

He concluded: "The proposals set out in this White Paper will deliver the real reform our acquisition system needs to provide the support our front line forces deserve, to maximise the benefit of our £160 billion ten-year defence equipment programme, and to deliver value for money for the taxpayer."



Hiring technical capability = early savings

THE SECRETARY of State said it was important to create a hard boundary between the customer and the provider organisation.

Responsibilities were not as clear-cut as they should be.

"We currently spend in DE&S £400 million a year on external technical support because we cannot hire the people we need.

"Being unable to hire somebody at £50,000 a year means that we are paying a contractor £1,000 a day to do the work.

"We expect the GOCO contractor, if we go down that route, to make substantial

early savings by hiring key technical capabilities into the organisation, rather than by bringing them in as technical contractors.

"Our big challenge now in the assessment phase is to negotiate a set of key performance indicators and incentive payment structures that align a GOCO contractor with the priorities of the Ministry of Defence."

In answer to a question from an MP about the future role of military personnel in acquisition, Mr Hammond said military personnel were not necessarily trained to be best equipped to deal with world-class

industrial project managers employed by the defence contractors.

Mr Hammond added that the United States was relaxed about proposals for changes in the management of DE&S.

Chief of Defence Materiel Bernard Gray had received a letter from the Under-Secretary for defence procurement confirming the US was confident that it would be possible to make the arrangements work.

"We have set up a joint working group to work through the issues that will need to be addressed before a decision is made," he said.

NEWSREEL

Exports are booming

NEW UK Trade and Investment defence and security organisation figures show UK defence exports reached £8.8 billion in the past year – a rise of 62 per cent from 2011 – maintaining the UK's position as the second most successful defence exporter after the United States.

New orders included Typhoon and Hawk aircraft. The Typhoon programme supports 8,600 jobs in the UK with an estimated further 1,500 jobs dependent on exports.

Philip Dunne,
Minister for Defence,
Equipment Support
and Technology,
said: "The MOD has
continued to play
a key supporting
role, recognising
that defence exports
make a significant
contribution to
the Government's
growth agenda.

"These results also demonstrate the high regard in which our Forces and their equipment are held by our allies and partner nations."

Parts gone

DISPOSAL of spare parts for out-of-service Nimrod aircraft which could not be reused has now been substantially completed, Minister for Defence Equipment, Support and Technology Philip Dunne has reported to Parliament.

Watchkeeper

WATCHKEEPER, DE&S' future unmanned air system, has made 72 training flights to date, all from West Wales airport, Aberporth, Ministers have told Parliament. Transformation charts a step forward

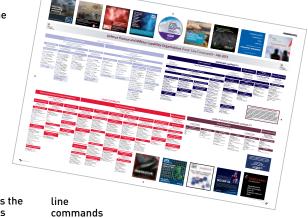
THIS EDITION of desider magazine contains the first edition of a new wallchart detailing the overarching structures and key personnel in newly-formed Finance and Military Capability organisations in the Front Line Commands.

The chart illustrates the new customer structures for the Royal Navy, Army, Royal Air Force and the new Joint Forces Command.

A further wallchart to be published later this year will detail the structure of the Finance and Military Capability organisation in MOD head office, which will continue to act as customer to DE&S for most major capabilities.

The change from a single central customer for the outputs of DE&S to five, one in each Command and one in head office, is the outcome of a recommendation of Lord Levene's Defence Reform report in 2011 and forms a key part of defence transformation.

DE&S Assistant Head Corporate Communications Ralph Dunn said: "We hope our readers will find this wallchart a simple and very useful guide to the new Finance and Military Capability structure in the front



and we intend to publish

updates every six months."

The Levene report said service chiefs should take responsibility and ultimately own the budget for detailed capability planning, subject to Head Office's direction on the required military capabilities.

Typhoon to be armed and ready with Meteor

RAF TYPHOON aircraft will be armed with Meteor missiles from later this decade after an agreement was signed by industry and the four Eurofighter nations.

During a short ceremony at the Paris Air Show, Defence Ministers from the UK, Germany, Italy and Spain witnessed a contract being signed between Eurofighter and the Nato Eurofighter and Tornado Management Agency that will see the missile system integrated onto the aircraft.

The Meteor Beyond Visual Range Air-to-Air missile, manufactured by MBDA, is a long-range weapon that can be used against a range of targets. The missile will complement the missile systems already in use on the aircraft, giving pilots a greater choice of weapons depending on their mission objectives.

Minister for Defence Equipment, Support and Technology, Philip Dunne, who attended the signing ceremony on behalf of the UK, said: "This is a further exciting step in the planned upgrade programme for this impressive aircraft. The entire programme is a powerful example of European government and industry



Typhoon, pictured with Meteor, will be armed with the weapon this decade

collaboration in both missile technology and combat air weapon system development."

Julian Knight, leader of DE&S' Beyond Visual Range Air-to-Air Missile team, said: "Signature of the main integration programme signifies the culmination of a great deal of effort by the Meteor and Typhoon communities to sufficiently de-risk the activity and negotiate the forward programme for delivery.

"The relative maturity of the integration was highlighted by a successful firing from a Typhoon in late 2012, which helped to secure the four Eurofighter nations' approval of the commitment. We will now jointly work to ensure timely delivery of the integrated capability to give the RAF, the other Eurofighter nations and the export nations a significant operational advantage."

All six Meteor partners – UK, France, Germany, Italy, Spain and Sweden – have placed production orders.

Typhoon's ground attack capabilities were instrumental to allied operations over Libya. The RAF took delivery of its 100th Typhoon aircraft earlier this year.

■ Typhoon for export: pages 26 and 27

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



NEWSREEL

Signing up to new care

HANHAM Health has been contracted to provide primary medical care and occupational health services to military staff at Abbey Wood. Work includes care for acute and chronic medical conditions, health screening and monitoring, as well as medicals and occupational assessments those serving in the military have to undergo, including aviation and diving medicals. Dr Kirstie Pearson is the lead GP for the site which covers nearly 1,600 staff, supported by Dr Sandy Jackson. Dr Rhian Johns, Dr Rob Sykes and Dr Lizzie Stafford.

Budget is confirmed

DEFENCE Secretary Philip Hammond said the Prime Minister and the Treasury had confirmed that the equipment plan would increase in real terms plus one per cent in the period from 2015 to 2020, and the MOD was not looking at changes that would reduce military manpower. The MOD would search for all efficiencies that could reasonably be found and delivered.

HQ on move

THE headquarters of British Forces in Afghanistan will move from Lashkar Gar to Camp Bastion this summer. Task Force Helmand has been based in Lashkar Gah, the capital of Helmand Province, since 2006 but will relocate in line with the drawdown of British Forces as the Afghan forces prepare to take operational lead.



THE JUGGERNAUT that is DVD rolled on this year celebrating its tenth anniversary and with it a distinct change of direction.

Unlike previous years where the focus had been on operations and rapid equipment procurement, the 2013 event on June 19th and 20th marked the step change experienced by the UK's Armed Forces as they begin to draw down in Afghanistan.

DVD2013, the UK's biggest military vehicle demonstration, has adapted to the change of operational priorities and focuses now on equipment in a contingent capacity.

Launching the event, Minister for Defence Equipment, Support and Technology, Philip

Dunne, spoke in front of three of the Armed Forces' key vehicles; the new remote-control Terrier, the highly-protected and agile Foxhound and the versatile MAN Truck Support Vehicle.

He said: "Operations over the last ten years have demanded that our vehicles were created or adapted to suit the challenges our Armed Forces faced in two very different campaigns.

"Through the ingenuity and dexterity of UK industry our troops have been provided with the high-quality, battle-winning equipment they needed.

"My challenge to industry for the next decade is to maintain the drumbeat of innovation that has underpinned the delivery of capability we're celebrating today as we transform our support to deliver the Army of the future under Army 2020."

Over the last ten years, the Army's vehicles have changed dramatically to counter the threats posed by operations in Iraq and Afghanistan but also to incorporate the latest technology. This year DVD brought together industry and soldiers to look ahead to the future requirements of the Army post Afghanistan.

The event, at Millbrook Proving Ground, saw industry talking to soldiers who have deployed on operations, to better understand the equipment that the Army will need to deliver Future Force 2020 and beyond. A wide array of vehicles and equipment were on show, with

DVD signals UK Forces' change of direction



various trucks and protected mobility vehicles kicking up dust as they took on the Millbrook test tracks.

Major General Carew Wilks, Director Land Equipment for DE&S, said: "The impact of DVD over the last ten years has been significant; from developing key relationships to driving innovation for kit and equipment, and ultimately, bringing capability into service.

"The priority now is for sustaining and supporting all land equipment, preparing for contingent operations while maximising opportunities.

DVD2013 is the first year that the Army, alongside DE&S, is hosting the event."

Director Logistics, Support and Equipment for the Army, Major General Paul Jaques, added: "We've always been involved, but this is the first year the Army formally has received the responsibility for budgeting and looking after its own equipment programme.

"That's a key change to our responsibilities. We've always been involved as users, but this year we've become the 'customer' with money."





On patrol, left to right: Ridgback, Husky, Coyote, Jackal, Foxhound, Panther and Mastiff are on display at DVD2013. A host of protected vehicles have served in Afghanistan and will be brought back to the UK as part of the redeployment of forces Left: Jackals line up at Camp Bastion on the way back to the UK while, below left, a Mastiff is loaded onto a C-17 and, below, a Ridgback is bio-washed

AS at 11th May this year, 335 Hellfire precision guided missiles and 51 GBU-12 laser guided bombs had been released from UK Reaper unmanned air vehicles in support of UK and coalition forces in Afghanistan, according to the latest statistics. Reaper is the UK's only remotely piloted aircraft system and weapons are only released by trained pilots.

Sub advice

ENGINEERING consultancy Frazer-Nash will provide safety and environmental advice on the **Future Submarine** programme. The company will help the MOD to ensure advancement past the design review in 2016 on replacement of the nuclear deterrent. Frazer-Nash is managing a team which includes BMT Isis, Jacobs **UK and RB Safety** Consultants.

Return of equipment is well on course

• An £11 million site processes equipment for return to the UK:

- Vehicles are biowashed which can take up to 24 hours;
- 400 tonnes of brass cartridge cases and 100 pallets of ammunition boxes have been salvaged:
- 99 per cent of vehicles have been earmarked for return to the UK:
- In the eight months to June, 625 vehicles were returned to the UK, with another 300 ready to make the
- · By the end of the process 2,720 vehicles will have returned to the UK;
- 300 tonnes of lithium batteries have been sent back to the UK;
- There were 137 UK bases: now in central Helmand there are only 13.

ASUK bases close in Helmand Province. or are handed over to the Afghan National Security Forces (ANSF), and the number of British troops reduces, so the associated equipment is being prepared for removal from theatre or for its next role.

A large proportion will find its way back to the UK, but not all. Which is why the process is called redeployment – and it is well on track.

Minister for Defence Equipment, Support and Technology Philip Dunne, speaking at DVD, paid tribute to the work of DE&S.

He said: "I'd just like to say a word or two about the challenges that we face in moving from the posture in Afghanistan to a contingent posture from 2014 onwards.

"I pay tribute to colleagues in DE&S in particular who have undertaken a thoroughly professional exercise in ensuring that we have planned how we are going to get our equipment back, and timetabling it.

"We have every confidence in the work that has been done that we will retrieve materiel back to the UK in good shape."

Commander Joint Force Support, Brigadier Duncan Capps said: "We are reducing the capacity, using up the stocks, but we are doing that without reducing capability.

"Even when we were creating Camp Bastion, we were designing it thinking about how we would eventually move out."

Bases adopted by the ANSF are being handed over with all the basics that keep a base running, such as beds and bedding. Bridging equipment and Hesco walls are either being redeployed, sold under the guidance of the Disposal Services Authority, or disposed of. No specialist and protected mobility vehicles will be left behind, said the Brigadier.

"We can't because of security issues, but more than that we have committed to only leaving equipment that has a full training package that can be maintained by the Afghans for a two-year period.

"More significantly, we are leaving the more simple kit that makes a huge difference which will give the ANSF an edge over the insurgents, such as nightsights and Vallon mine detectors."

NEWSREEL

Chinook deal extended

SELEX ES has been awarded a two-year extension to its contract to support the Baker Defensive Aids System fitted to Chinook helicopters. The contract uplift will extend support until March 2015 for the whole RAF fleet including the new Mk6 aircraft due for delivery soon. Project Baker originally saw Selex taking part in an urgent operational requirement to provide an integrated system for Mk2 and Mk3 helicopters. Since then the company has supported ongoing operations and continued to develop new ideas, especially for issues that have been raised in theatre.

Reaper stats

Sting Ray warhead enters service

DE&S TORPEDOES, Tomahawk and Harpoon project team has achieved the inservice date of a complex torpedo warhead programme well ahead of schedule.

A five-strong DE&S team led by Ray Drury, supported by a supplier team under prime contractor BAE Systems, achieved acceptance of the Sting Ray Mod 1 insensitive munition warhead by its customer in Navy Command three months ahead of the originally planned deadline of next month.

BAE Systems was awarded a contract at around £60 million in 2009 to design and manufacture an insensitive warhead for the existing Mod 1 weapon.

Sting Ray is a lightweight antisubmarine torpedo carried by Royal Navy warships and anti-submarine helicopters and has been in service since the 1980s.

Mr Drury said: "Equipping the weapon with a new warhead, as part of the MOD's wider insensitive munitions programme, is a huge benefit. In addition to providing a significant capability enhancement, it provides better protection for personnel during storage and operations."

Co-operation with the Royal Norwegian Navy, which also uses the Sting Ray Mod 1 torpedo, helped ensure the programme met its targets.

"Securing the in-service date ahead of schedule is a huge achievement on a complex programme like this. We worked closely with international partners against a very demanding warhead specification and took the weapon through exhaustive demonstration trials," added Mr Drury.

"The new shaped-charge warhead is designed to defeat the pressure hulls of the most advanced submarines and we are confident this will help the weapon maintain the Royal Navy's combat advantage in underwater warfare for many years."

Torpedoes, Tomahawk and Harpoon leader David Easton said: "This achievement is a huge credit to everyone involved. My team has worked closely with the contractor, sub-contractors and international partners to implement opportunities within the programme. This has benefited all parties and delivered an excellent improvement in capability to our customer."





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A DE&S team has successfully brought a series of complex IT systems into one new building for around 700 Defence Intelligence staff

Personnel began moving into the Pathfinder Building at RAF Wyton in January from a number of sites around the UK and Germany. All were in place by Easter, three months ahead of schedule.

Pathfinder Building

The System of Systems team, from left: Matthew Rammell (CGI), Steve Gains (Atkins), Alan Stringer (Atkins), Ian Smith (IMAGE leader), Chris Beeson (IMAGE programme manager); John Dickinson (IMAGE), Caroline Maynard (QinetiQ), Mac McMillan (Atkins), Nick Fyfe (IMAGE), Andy Ross (QinetiQ), Andy Wade (CGI)

Relocation – the Programme to Rationalise and Integrate the Defence Intelligence Estate, or PRIDE for short – aims to improve the collection of all types of intelligence. Full operating capability was achieved last month.

The DE&S' Imagery and Geospatial Systems (Image) team led the delivery of the hugely complex and highest risk

elements of PRIDE providing new and transitioning legacy IT systems for staff to do their jobs in the new building, while enabling operations to continue round the clock.

Although the System of Systems team the activity, successful delivery saw contributions from DE&S teams across intelligence, surveillance, target acquisition and reconnaissance Information and Systems and Services. along with industrial and international partners, other government departments, the PRIDE team within Joint Force Command and the Joint Forces Intelligence Group users.

The System of Systems programme approach enabled individual IT systems to be introduced and integrated so the total was far greater than the sum of the parts.

A final review will be held this summer to ensure lessons are fed into the future C4ISR programme.

The last staff from the Defence Geospatial Intelligence Fusion Centre at Brampton moved into the new building in March which achieved a DE&S strategic anchor milestone.

Air Vice-Marshal John Rigby of Defence Intelligence said: "PRIDE Wyton is proving to be an example of MOD and its people operating at their best to deliver a world-beating capability.

"By being clear on requirements, benefits, responsibilities and programme structure – managing risk and seizing opportunities – we have proved what MOD people and defence can do if given the resources and freedom to do so."

Job service launched INJURED service personnel are being given access to new sustainable careers thanks to the launch of the Recovery Career Services. Manufacturers including Aston Martin and Jaguar Land Rover, along with businesses such as Barclays, will offer competitive work placements for injured troops. They join more than 200 commercial providers who

have signed up to provide sick, injured and wounded service personnel with exciting opportunities including working as pit crew at the World Endurance Championships in Le Mans. The exclusive employment service will ensure injured troops have the best opportunity to compete in the civilian employment market.

NEWSREEL

Test school reaches 70

SPEAKERS from industry joined the MOD and QinetiQ last month to celebrate the 70th anniversary of the Empire Test Pilots' School (ETPS). Established in 1943 ETPS trains professionals to lead and deliver trials on all types of fixed and rotary wing civil and military aircraft. Cdr Mark Macleod, Commanding Officer of ETPS, said: "Over the past 70 years we have trained more than 1,650 test pilots and flight test engineers from 26 nationalities. We will continue to be at the forefront of developing and delivering relevant flight test training for the MOD and international partners." The school operates under the Long Term Partnering Agreement between DE&S and QinetiQ.

Top turnout

MORE than 1,400 exhibitors will attend DSEI, the London-based defence and security event in September, making it the most substantial so far. The RAF will play a central role with it largest-ever contingent.

New courses

A trio of new workbased distance learning degrees for serving personnel have been launched by the University of Lincoln with the first people set to enrole this month. The new degree courses are BSc (Hons) in Aerospace Engineering and Airworthiness Management: Communications Engineering Management; and Communications Management.

Jim's vertical landing is a Lightning II eye-opener



Hover craft: Jim Schofield's RAF F-35 milestone

SQUADRON LEADER Jim Schofield has again praised the capabilities of the Lockheed Martin F-35B after completing a vertical landing of the short takeoff and vertical landing (STOVL) version of the Lightning II.

After the flight from Naval Åir Station Patuxent River in the US, Sqn Ldr Schofield said: "The F-35 has truly revolutionised STOVL flying. With legacy types, such as Harrier, the pilot was always working hard to land the aircraft onto a hover pad or ship.

"Now with F-35B, at the press of a button the aircraft transforms into 'short take-off or vertical landing' mode whereupon the aircraft can take off or hover hands-off. This means pilots will require less training and operating the aircraft will be much safer than legacy types. It's a fantastic aircraft to fly." ☐ The MOD expects to place an order for the first squadron of Lightning II aircraft this autumn, and by 2020 expected orders would total 48 aircraft. Minister for Defence Equipment, Support and Technology Philip Dunne has told MPs.

The jets would be based at RAF Marham and an aircraft carrier would routinely have 12 fast jets embarked for operations whenever she sailed outside home waters, while retaining the capacity to deploy up to the 36 previously planned.

"Five hundred British companies are already involved in the programme through fair and open competition. The British defence industry is exceptionally well placed to benefit from any future export opportunities for this fifth-generation aircraft."

☐ JSF progress: page 33

Ocean takes on new sewage system

WORK HAS been completed on schedule to prepare installation by Babcock of a first-of-class Membrane Bio-Reactor (MBR) on *HMS Ocean*.

This represents a significant proportion of the ship's current upgrade and an integral part of the 15-month overhaul at Devonport.

The new MBR replaces the ship's existing 15-year-old sewage treatment system and will be capable of processing both waste water and sewage (black and grey water, galley, laundry, sink and shower waste).

☐ Link Microtek has been awarded a fouryear contract for spares, repairs and other support for the Azdec mobile infra-red communications system installed on various Royal Navy ships.

Azdec provides secure, wire-free, short-range voice communications, giving personnel the freedom to roam unhindered from their base positions.

The system consists of a compact base station, a number of fixed infrared antennas, a choice of headsets, operators belt-mounted battery packs/control units, and a central battery-charger unit.

Carrier combat system passes stringent test

MAJOR ELEMENTS of *HMS Queen Elizabeth's* combat systems have been successfully tested.

The event took place at the Mission Systems Integration Facility at Portsdown Hill where Aircraft Carrier Alliance teams, supported by the Royal Navy, put the ship's combat management system (tactical and air traffic control), navigation and bridge, identification friend or foe and the meteorological systems through their paces.

The testing successfully demonstrated more than 130 requirements. Most significantly the team was also able to display live data from the site's long range radar on *Queen Elizabeth's* combat management systems and air traffic control systems.

Commander Steve Roberts, the carrier's combat system manager, said: "This test is a significant milestone in integration of the complex systems that will enable *HMS Queen Elizabeth* to operate F-35B Lightning II jets and Merlin helicopters.

"Getting all these systems 'talking' to each other and exchanging data to display the aircraft carrier's air traffic control picture has required a lot of preparation and hard work.

"I am very grateful for the willingness and enthusiasm shown by all parties involved in this successful trials activity."



And the last section is on its way

THE AFT island of *Queen Elizabeth* passes under the Forth Bridge, above, on 21st June on its journey from BAE Systems' Scotstoun yard to Babcock Rosyth.

The island, also known as Upper Block 14, is the final section of the first carrier to be delivered to Rosyth.

It will operate as an airport control tower and is the centre of the flight operations on the ship. Housing 110 compartments, it is more than 30 metres tall, weighs 750 tonnes and contains more than 44,000 metres of cable.

Aircraft Carrier Alliance Programme Director Ian Booth said: "The arrival of the aft island is a massive milestone in the assembly of *HMS Queen Elizabeth*. Getting to this point has required a fantastic amount of work from thousands of skilled men and women. Seeing this section arrive at Rosyth is a proud moment. Now, before the year is out, we will complete the assembly."

The island was completed ahead of schedule in just 86 weeks. Queen Elizabeth is the first carrier to use an innovative design of two islands. The forward island has already been erected onto the flight deck of the ship in Rosyth and houses the main bridge. Both islands are designed with the ability to incorporate the other's role in an emergency, thus increasing the survivability of the ship.

Deterrence and the numbers game

THE MINIMUM number of submarines required to maintain a continuous-at-sea nuclear deterrent (CASD) - currently four - will be determined in the main gate investment decision for the successor programme, expected in 2016.

Defence Secretary Philip Hammond told MPs: "The main gate decision, which will define the number of submarines required to maintain CASD, will consider the case for four or three submarines. But I can say without equivocation there is no possibility of maintaining CASD with two submarines.

"Simply reducing the fleet, even if that were possible while maintaining CASD, would not generate proportionate savings. Many of the costs are fixed – the costs of development and maintaining industrial capability, not merely at Barrow-in-Furness for submarine building, but in the nuclear propulsion industry.

"No one should ever forget that these high-end, hightechnology platforms support the very top end of British manufacturing industry – the high-precision, high-technology engineering industry on which the revival of manufacturing depends."



Sentry duty: an E-3D based at RAF Waddington

Indicators will help Sentry fuel safety

THE SAFETY of the RAF's E-3D Sentry aircraft is to be enhanced with the integration of a new fuel quantity indicator system.

Northrop Grumman will design, develop, integrate, test and support the system for the Airborne Warning and Control System (AWACS) aircraft at RAF Waddington.

Work will be performed under the company's existing Sentry E-3D Whole Life Support Programme (WLSP) which lasts until 2025.

Modification to the contract is valued at around £12 million over three years.

"This modification is a significant safety enhancement for our AWACS platform," said Gp Capt Adam Northcote-Wright, delivery manager for the Sentry Air ISTAR Programme.

"I am very pleased with the partnering ethos demonstrated by the Air ISTAR programme team and Northrop Grumman."

The company's Sentry director Kevin Longman added: "Our industry team's design organisation status and our strong relationship with the MOD were paramount in our selection as integrator of the system for the Sentry programme."

Design, development and integration will be carried out at RAF Waddington and at Northrop Grumman's facilities in Herndon and Melbourne in the USA.



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Penzance makes return to the Fleet

STAKEHOLDERS HAVE been praised by DE&S after the return of HMS Penzance to the Fleet.

The Sandown class minehunter has left Babcock's Rosyth dockyard following a six-month Support Period (Docking) by Babcock.

Captain Matt
Harrison, leader of DE&S'
Mine Countermeasures
team, said: "I am
delighted that HMS
Penzance is back at sea in
such good material state
and with significantly
enhanced capability, a
result of hard work by all
stakeholders."

Upgrades have included a replacement fire detection system; upgrades to the high pressure air system; DII installation; installation of Response to Attack on Ammunition arrangements; Chloropac to combat marine growth in sea inlets and a galley upgrade.

Navy can scan the skies

ROYAL NAVY warships are to benefit from a new surveillance capability as part of a £30 million contract.

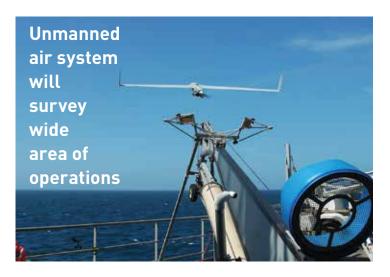
ScanEagle is a maritime reconnaissance asset that can be launched off the back of Royal Navy and Royal Fleet Auxiliary ships day or night to gather intelligence and survey the wider area of operations.

Built by Insitu, a subsidiary of Boeing Defence UK, the ScanEagle is the first maritime specific unmanned air system capability to be delivered in support of naval operations.

It will complement the existing intelligence, surveillance and reconnaissance assets used on operations such as helicopters and long range radar

The unarmed aircraft, which has a wingspan of just over three metres and weighs 22kg, is launched from ships into the sky by a pneumatic catapult.

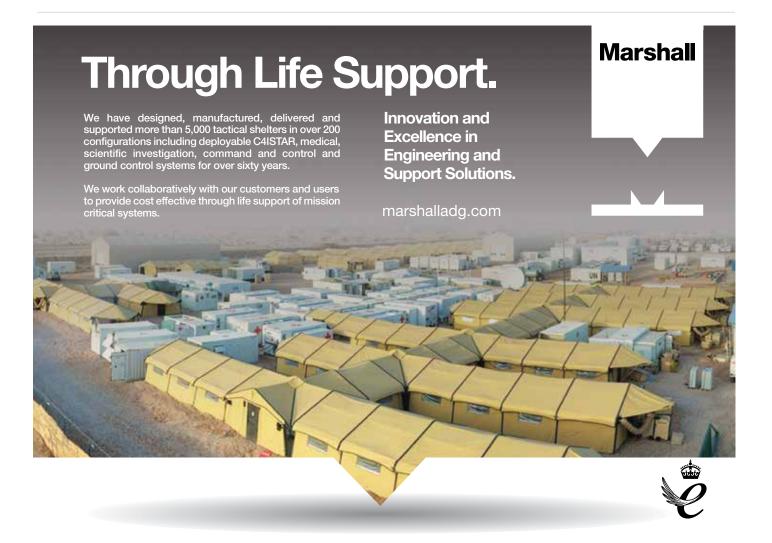
Flying at about 60 knots, it is commanded by a specialist



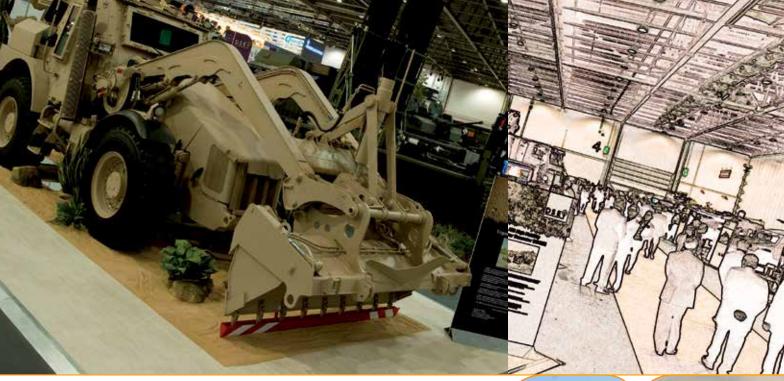
Takeoff: ScanEagle is launched on its latest intelligence mission

team on board the ship. At the end of its flight the ScanEagle is recovered back to the ship.

Captain Ian Annett of Information Support at Navy Command said: "ScanEagle represents an important addition to the Royal Navy's intelligence, surveillance and reconnaissance capability. Its ability to deploy during the day and night, coupled with the technology it uses, will give commanders a clearer picture of the operational situation whenever it's required."



DSE 2013



an international tour de force



Sept 10-13

a **desider** focus on the potential of UK defence exports





An international tour de force

efence and Security Equipment International (DSEI) is the largest integrated defence and security exhibition in the world, focusing on key sectors such as air, land, naval and security. Hosted at London's ExCeL every two years, DSEI continues to serve as the premier meeting place for the world's military communities.

Organised by Clarion Events, DSEI 2011 attracted 1,391 exhibiting companies representing 46 countries and included 40 international pavilions, with 28,440 international visitors and 1,070 global VIPs in attendance. This year's DSEI is set to break previous records and is therefore the must-attend event of 2013 with more exhibitors, zones and demonstration content than ever before.

International breadth

To date more than 40 international pavilions have confirmed their presence at DSEI 2013, which will provide exclusive opportunities to build partnerships with international business suppliers and visitors.

New countries attending for the first time include Belgium, Chile, Estonia, Serbia, Slovakia, South Korea, Spain and the United Arab Emirates. Other nations repeating their 2011 pavilions include Australia, Brazil, Germany, Holland, India, Israel, Turkey, UK and USA.

It is expected that DSEI 2013 will attract well over 1,000 global VIPs with around 30,000 visitors in attendance.

Themed Zones

At DSEI 2013, six themed zones will make it easier for visitors to meet exhibiting companies and view their associated products, either in a static display or in a realistic demonstration scenario. Focus areas include, but are not limited to: Air Zone; Land Capability Zone; Medical and Disaster Relief Zone; Naval Zone, to include waterborne demonstration; Security and Special Forces Zone; and the Unmanned Systems Showcase.

Each zone will have a dedicated theatre area where visitors can attend free educational sessions that are designed to showcase the latest technologies within the industry. Visitors to the exhibition can listen in to panel and individual discussions on a wide range of subjects including, but not limited to: best practices and innovations with the medical field; hot topics within maritime including future mine countermeasures, mine warfare and anti-piracy; synergies and lessons learned between defence and the civilian arena reflecting the increased co-operation and partnership between large security companies and defence primes; and the RAF Presentation Team will deliver dynamic and interactive presentations providing the audience - from industry and across the globe with a key insight into how the Royal Air Force is currently leading and delivering effective air power on behalf of the nation, and why industry has an equally



Air Zone

DSEI 2013's air component will address the front line operational requirements and support functions available to the aerospace sector. Outside the east entrance to ExCeL there will be the largest air display ever, with an outdoor exhibition area featuring the latest aerospace capabilities to include operational platforms such as the Eurofighter Typhoon multi-role combat aircraft.

The Air Zone has grown notably in the last few years and 2013 will showcase an impressive variety of exhibiting aerospace companies, ranging from primes such as GE Aviation, Raytheon and Rolls-Royce through to supply chain providers, which include Aerotron, Avalex, AT Engine Controls, Hale Hamilton, Helisota, National Air Cargo, Newbow Aerospace, Softcom Plus and Tek-Tite.

The Royal Air Force is also showing its support for the exhibition. Recently a Royal Air Force spokesperson said; "Royal Air Force senior leaders, and some of our youngest and brightest personnel, shall be fully integrated within the event as the RAF and industry forge ever-closer mutual respect in our common agenda of security and prosperity."



DSEI 2013 will see the largest Land Capability Zone to date which is evolving to provide even more suppliers, content and diversity. It will include more than 70 dedicated stands featuring leading players in the global industry, ranging from prime contractors to niche specialist suppliers such as BAE Systems, Daimler, General Dynamics, Jankel Armouring, JCB, Land Rover, Patria, Rheinmetall and Supacat.

The vehicle display area is being expanded this year following its success in 2011 where more than 70 per cent of visitors attended. Exhibitors already signed up include: MBDA Nexter, Pearson Engineering (displaying the PEROCC), Selex ES (showing the Mastiff), Iveco, Renault Defence and Streit Group.

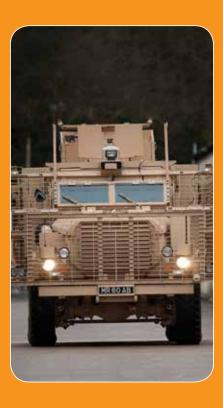
Naval Zone

DSEI is working closely with various nations in providing more variety and higher numbers of visiting warships this September, but to date DSEI has secured a K-130 Class Corvette from the German Navy, a Holland Class Corvette from the Royal Netherlands Navy, Two Swedish Koster Class MCMVs, a Type 23 Frigate and River Class OPV from the Royal Navy and a ROK KDX-2 Destroyer with a Chun Jee Logistic Support ship in attendance.

This year's event will also stage its most extensive waterborne demonstration programme incorporating an expanded marina and in depth scenarios, encompassing current and future threats to maritime security and naval warfare.

"The core appeal of DSEI touches and influences international defence audiences spanning air, land and sea. With our enhanced VIP and delegations programme, there is no doubt that DSEI is the mustattend event in 2013. It offers a unique blend of displaying the latest innovative developments as well as networking in a wide range of themed conferences and theatre areas to discuss key developments in the militaryrelated arena."

Duncan Reid.
DSEI Event Director,



DSEI will be held at ExCeL London from 10-13 September 2013. www.dsei.co.uk



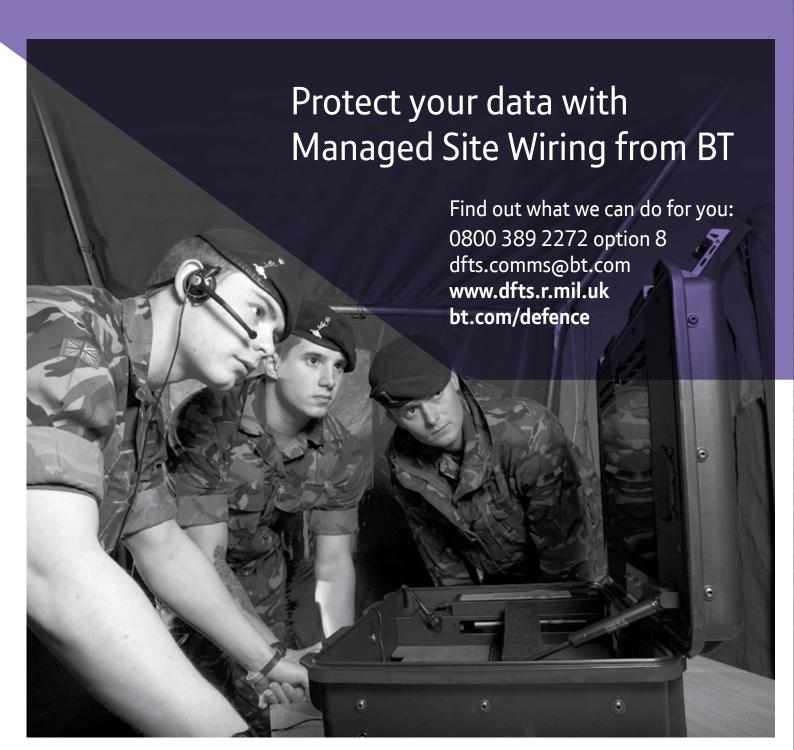








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TYPE 26

GLOBAL COMBAT SHIP



THE 2010 Strategic Defence and Security Review confirmed that the Type 26 Global Combat Ship (GCS) would begin replacing the Type 23 frigates as soon as possible after 2020.

Alongside adaptability to meet the future demands of the maritime environment, affordability, flexibility, interoperability and exportability are all critical features of this programme. The T26 GCS programme is currently in its assessment phase, with the results of this phase due by the middle of this decade but the current planning assumption is for a class of 13 ships. It is anticipated that T26 GCS will be in service with the Royal Navy into the middle of this century and beyond.

work. It will be capable of operating independently for significant periods, or as part of a task group. With a common acoustically quiet hull it is envisaged that the UK T26 GCS will be delivered in Anti-Submarine Warfare (ASW) and General Purpose variants.

Based upon this core common platform (the platform without its combat and propulsion systems) and without driving costs into the UK procurement programme, potential export versions of the GCS could be delivered in three variants – Anti-Submarine Warfare, Multi-Mission and Air Defence.

not materialise for a complete, or partial T26 GCS package there will almost certainly be export opportunities for the systems destined for T26. These systems, particularly those being de-risked through T23 Capability Sustainment Programme (CSP) such as the Sea Ceptor Missile System, Artisan Medium Range (997) Radar, UAT EW System and 2087 Sonar, have real export potential in the shorter term.



Hawk - RAF mainstay with

a foot firmly in the future



HAWK AIRCRAFT have been the mainstay of the MOD's fast jet training aircraft fleet for decades and are also used by the world-renowned RAF Red Arrows display team and by the civilian-piloted Royal Navy's Fleet Requirement Air Direction Unit (FRADU).

The older TMk1 Hawk continues to fulfil valuable duties with the two RAF squadrons as well as the Red Arrows and FRADU. The latest model of Hawk, the TMk2, now equips a squadron at RAF Valley on Anglesey.

The first four pilots have graduated from the UK's new advanced United Kingdom Military Flying Training System (UKMFTS) fast jet training course, on the TMk2, in a major milestone for this fast jet training programme and the new aircraft.

The next course, with two Royal Navy and four Royal Air Force pilots, will graduate next month.

In a ceremony at RAF Valley, the Chief of the Air Staff, Air Chief Marshal Sir Stephen Dalton, praised the efforts of the four Royal Air Force pilots of Advanced Fast Jet Training Course 001. He said: "The pilots who graduated

He said: "The pilots who graduate today can be proud of what they have achieved as the pioneers of this new advanced training system, the Hawk T2, and can look forward with confidence that, following their conversion to operational aircraft, they will very soon take on their roles on Royal Air Force front line squadrons.

"Having completed the course on the new Hawk they are some of the best trained pilots to graduate from UK fast jet training. Royal Air Force Valley delivers the most advanced fast jet training programme in the world.

"At the core of it, the Hawk's advanced cockpit closely resembles that of our current and future combat aircraft, which will reduce the time required to convert to flying an operational aircraft, be that Typhoon, Tornado or the Lightning II.

"The live flying at RAF Valley, on the Hawk T2, is supported by an increasing range of synthetic training on the ground. This makes every flying hour more productive and makes this entire programme even more cost effective for the United Kingdom."

The Hawk TMk2 aircraft was designed and manufactured by BAE Systems and delivered to RAF Valley between 2009 and 2011. Development and manufacture is complete. The aircraft is well liked in the user community and is considered to be a successful acquisition.

The Hawk TMk2 is within the scope of the UKMFTS programme. UKMFTS training service partner, Ascent, integrates the Hawk

instructors, simulators and courseware to deliver the fast jet training service to UK aircrew at RAF Valley.

Current assessment is that the output standard from UKMFTS FJ Phase IV training is a good match to the entry standard for F-35 Operational Conversion Unit, so there are clear opportunities for collaboration with north European F-35 users and the US.

As many as 20 aircraft have been available on the line on some days, which from a fleet of 24 is impressive. To meet the maximum capacity for MFTS of 9,200 hours per year, only 16 or 17 would be needed

Hawk training at RAF Valley , part of the UK Military Flying Training System, is as realistic as it can be





The Type 23 Frigate, the backbone of the Royal Navy, is changing. Originally designed as a North Atlantic submarine hunter, the class has evolved into an effective general purpose warship.

To ready the frigate force for the ever changing world in which it operates, a number of major new systems have been developed and are being integrated within the class – the Frigate Capability Sustainment Programme – ensuring the ships remain a force to be reckoned with for the coming decades.

The new ground-breaking air defence system Sea Ceptor (developed with MBDA) will replace Seawolf, offering greater capability, with a uniquely low installation footprint and reduced cost of ownership.

The new Artisan 3D radar (RT997) offers a significant improvement in situational awareness for both air and surface, which, coupled with the new DNA(2) Command System and Shared Computing Environment puts the command firmly in control of the battlespace.

The MSI automatic small calibre gun enhances the ship's surface defence abilities and further contributes to the platform's sensor suite with two new electro-optic directors.

Additionally the introduction of an infra red search and track system and data fusion engine will further improve the situational awareness to the ship's warfare team.

The underwater world hasn't been neglected, with a programme of work delivering the latest Thales 2087 towed array sonar and a technology refresh for the S2050 hull-mounted sonar. This complements the Merlin helicopter, collectively ensuring the frigate remains at the forefront of anti-submarine warfare.

Finally, to support these enhanced systems, the ship's infrastructure will change too. New diesel engines, generators and conversion equipment will be fitted, ensuring that there's enough clean power available and as a by-product reducing the ship's fuel

Before and after: Type 23 frigate *HMS Argyll*, above, and in a computer generated image of how she might look after her sustainment programme. A major difference is the disappearance of her Seawolf missile guidance radars



Olympic-sized capability of StarStreak

StarStreak High Velocity Missile is the world's fastest very-short-range weapon. Its peak velocity of over Mach 3 means it can cover a kilometre in less than a second and is ideally suited to fast attack and rapid pop-up targets. Targeting and full control of the three dart missiles is maintained by the operator, via the use of a projected laser information field, throughout the entire engagement. StarStreak can be deployed by Shoulder Launch (SL), Lightweight Multiple Launcher (LML), and Self Propelled (SP) vehicle-mounted platforms.

For London 2012, LMLs were deployed on high rise rooftops overlooking the Olympic Stadium, providing protection for the whole Olympic Park. The system was co-ordinated using the Air Defence Alerting Device (ADAD) to offer early detection and warning against any potential air threats.

The UK has both the man-portable SL and LML systems and the self-propelled vehicle-based system for StarStreak currently in service. Following the award of the Air Defence Availability Project to Thales UK in 2008, the support of all the UK's StarStreak High Veolocity Missile equipment is guaranteed until 2020. This availability-based contract also involved the development of a new fire control capability for the system, together with automatic target tracking and a new standard of missile.

StarStreak is very much at the forefront of UK air defence, and Thales UK is seeing significant interest from overseas customers in the various deployment systems; including RapidRanger system, a lightweight highly-automated vehicle-based weapon system capable of delivering a rapid reaction response to threats from the air.





Typhoon - unlimited potential

The RAF now has four operational Typhoon squadrons and during the last year received its 100th production aircraft with deliveries of Tranche 2 concluding later this year

THE FIRST of 40 RAF Tranche 3 Typhoons started electromagnetic testing earlier this year and deliveries to the RAF are expected to start before the end of this financial year.

Since DSEI2011 the aircraft has more than demonstrated its multi-role capabilities on operations in support of the UN over Libya when it worked with coalition allies to enforce a no fly zone, in continuing to provide air defence for the UK and also during the London Olympics in 2012 providing security as part of a wider task force.

Typhoon has also demonstrated its eyecatching capabilities on deployments, including the Falkland Islands where the aircraft provides air defence capability, and on multinational exercises, most recently in the United Arab Emirates.

The Typhoon user family has now grown to seven national air forces with the announcement that the Sultanate of Oman is to purchase 12 aircraft from BAES.

Prime Minister David Cameron welcomed the news of Oman's decision. He said: "Oman's choice of Typhoon recognises the capabilities of this versatile aircraft and its long term potential to stay at the forefront of military capability for many years. Oman will be a valued member of the growing Typhoon family."

Typhoon is also competing in a number of combat air export competitions around

the world where air forces are seeking to move to the next generation of air capability.

Four Typhoons deployed to Malaysia earlier this year to help demonstrate the aircraft to the Malaysian authorities, who wish to replace some existing fighter aircraft. The aircraft took part in an exercise to mark the 40th anniversary of the Five Power Defence Arrangements with Australia, Malaysia, Singapore and New Zealand and put on an impressive display at the Langkawa Lima air show.

The aircraft's military capabilities have continued to develop with 6 Squadron, the RAF's lead multi-role formation, dropping guided Paveway II bombs earlier this year.

Agreement on the installation of the Drop 2 upgrade across the Tranche 1 fleet has also been reached, and the Meteor beyond visual range air-to-air missile was successfully launched from Typhoon as part of the Future Enhancements Flight Test Programme.

Future technological advances continue to play an important role in the development and production of Typhoon and, as a result of the Strategic Defence and Security Review's confirmation in 2010 that Typhoon would form part of the UK's future fast jet force, further weapon

Pictures: Geoff Lee www.planefocus.com





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THE AGUSTAWESTLAND Wildcat helicopter, right, is a versatile small helicopter with a range of potential uses including maritime attack, surveillance and battlefield command and control.

The UK has procured 62 Wildcat aircraft – 34 Mk1 Army Variants and 28 Mk2 Maritime Attack for the Royal Navy. The aircraft has also enjoyed some early success on the international market with a sale recently announced to South Korea.

The Wildcat's predecessor, Lynx, has been a strong export for UK and variants are operated by around 14 countries across the world including UK, France, Germany, South Korea and Denmark.

The UK has played a full and active role in this international user community through the auspices of the successful Multi-Lateral Lynx Support Committee and plans to do similar for Wildcat as the international programme develops in the years ahead.

The Wildcat helicopter is a replacement for the ageing Lynx fleets operated by the Royal Navy (Mk8) and the Army (Mk7 and 9A). The programme was initiated by the MOD in 2002, and AgustaWestland was confirmed as prime contractor in 2006.

Wildcat was unveiled to the public at the Farnborough Air Show in July 2012 and initial deliveries to the MOD in May 2012 were of the Army Helicopter Mk1 variant. The Royal Navy variant, Helicopter Maritime Attack (HMA) Mk2 is now being introduced into service and the Wildcat is due to continue in

Adaptability until 2040

service until the 2040s. The adaptability of the Wildcat to provide both maritime and land helicopter capabilities within one airframe was an essential requirement of the programme from the beginning.

The Wildcat will perform a range of tasks on the battlefield including reconnaissance, transportation of troops and materiel, and provision of force protection, and represents a significant increase in capability over the existing Lynx aircraft.

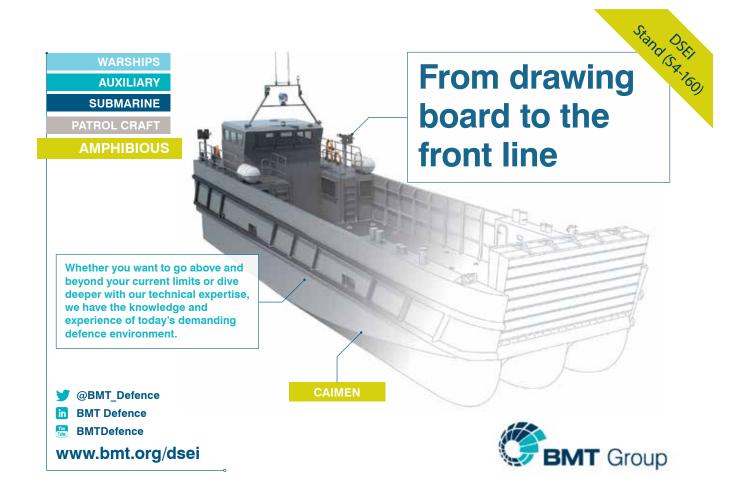
The aircraft has a more powerful engine allowing it to be flown in extreme conditions all year round. It is also equipped with a more robust and easily maintained fuselage structure, a high tech interactive cockpit display, enhanced crash protection and survivability, an

advanced electro optical sensor and a new radar system that provides 360 degree surveillance.

The Wildcat HMA Mk2 will also

Ganny Sting Pay tomodogs a dogs

carry Sting Ray torpedoes, a doormounted 0.5 inch heavy machine gun and new light and heavy variants of the Future Anti-Surface Guided Weapon Missiles.





Lonely workhorse: a Merlin is pictured during a Jordan-based exercise

DE&S supports Merlin to play vital role on the world stage

UK MILITARY variants of the Merlin helicopter are derived from the EH101 design which was originally developed as an Anglo-Italian collaborative programme.

The helicopter is manufactured by AgustaWestland of Yeovil, a subsidiary of Finmeccanica, which is an Italian/UK-based company.

In total, the UK has procured 72 Merlin aircraft (44xMk1, 22xMk3 & 6xMk3a). The aircraft has also enjoyed good success on the international market with Canada, Italy, Denmark, Portugal, Algeria, Japan, Turkmenistan, Saudi Arabia and India all operating or planning to operate variants of this versatile medium-lift helicopter platform.

There are distinct differences in capability between the Merlin/EH101 variants operated worldwide with roles ranging from Maritime Patrol, Anti-Submarine Warfare, Battlefield Support to VVIP Transport. However, there remains large areas of commonality in the air vehicle which lend themselves to ongoing and through-life international collaboration.

DE&S continues to play an active and supporting role in the development and operation of the worldwide Merlin/EH101

fleet. There is a hugely successful international working group which has benefited all operators in the form of shared best practice on both operating and supporting the aircraft.

As this user community continues to grow, the UK will be looking to further leverage the benefits associated with a larger international fleet and to contribute to the continued success of this versatile platform which is of

mutual benefit to all. Of interest, the Merlin project team hosts embedded international representatives from the Italian Navy and the Japanese Maritime Self Defence Force.

The UK Merlin has a single main



rotor and conventional tail rotor and is powered by three Turbomeca RTM322 engines. It has a maximum all up take-off mass of 14,600 kg (Mk1) and 15,600 kg (Mk3/3A) and a maximum speed of 149 knots.

Pilot workload is eased with digital automated flight control and aircraft management systems, integrated GPS/INS based navigation, extensive communication systems and glass cockpit displays.

The aircraft's agility and low noise signature enhance effectiveness and minimise environmental impact.

The Merlin incorporates the latest technology in composite structures, multiple system redundancy and health and usage monitoring systems to minimise life cycle costs. Active control of structural response struts reduce vibration at all speeds.





DSEI 2013 – a window on defence interoperability

Advertising feature

DEFENCE AND Security Equipment International (DSEI) is the largest integrated defence and security exhibition in the world, focusing on key sectors such as air, disaster relief, humanitarian, land, medical, naval, security and unmanned.

Hosted at London's ExCeL every two years, DSEI 2013 provides the ideal meeting place for global defence and military communities.

Organised by Clarion Events, DSEI 2011 attracted 1,391 exhibiting companies representing 46 countries and included 30 national pavilions, with 28,440 international visitors and 1070 global VIPs in attendance.

This year's event is set to break these previous figures and is the must-attend event of 2013 with more exhibitors and educational content than ever before.

One of the key emerging themes of recent DSEI events has been that of international peacekeeping and combined military operations, which have centred on interoperability and Land Open Systems Architecture (LOSA) at the heart of future development. DSEI 2013 will showcase and demonstrate the full capabilities of interoperability and LOSA.

White Paper

In 2012, the UK Government issued its White Paper entitled National Security Through Technology, which is an explicit part of "the process of transforming both the Ministry of Defence itself and the UK Armed Forces, as embodied in the vision of Future Force 2020."

In a section dedicated to open systems and the modular approach, the document emphasised this topic's importance for defence acquisition: "Open systems enable us to join together and use equipment that was made in different times and places, thus creating more scope for upgrading and easing interoperability with new capabilities.

Further, they allow the use and replacement of high-volume generic components within systems, opening up opportunities for off-the-shelf components."

The Government also highlighted the

concept of modularity whereby a range of new platforms, eg aircraft, ships and vehicles, are designed to accommodate easy replacement of individual line items as well as enhancements and new system developments.

Foxhound

In a June 2012 speech given by the then Minister for Defence Equipment, Support and Technology, Peter Luff MP confirmed that the Government could deliver an armoured vehicle programme over the next decade, for which he noted: "And at the heart of this programme will be the development of LOSA, ...open systems, and the flexibility they provide, are a central principle of the White Paper we published earlier this year. Foxhound....which has already begun to arrive in Afghanistan, is a great example of this new generic architecture structure."

LOSA is determining the way the land domain evolves, defining its open architecture for systems integration and interoperability in the land environment.

In late 2010, the MOD confirmed a contract with General Dynamics Land Systems-Force Protection Europe (GDLS-FPE) to supply 200 new patrol vehicles to be known as Foxhound, the British name to replace Ocelot. Unlike mine-protected vehicles based on an existing commercial chassis, Foxhound incorporates modular flexibility and a unique design integrating V-hull, blast-protection technology with a demountable protected crew pod that allows multiple configurations for different roles.

In April 2013, DSEI exhibitor Ricardo received an order from prime contractor GDLS-FPE (GDUK is a DSEI Platinum Sponsor) for assembly of 76 additional vehicles, bringing the total Foxhound fleet size ordered to date to 376; all vehicles are assembled by Ricardo at its specially-designed UK production line, commissioned in 2011

RED research

In 2012, the MOD awarded a contract

for a new programme providing innovative integration in the land environment. The first phase of LOSA Research, Experimentation and Development (RED) was conducted successfully



in October 2012, with extensive results and lessons being taken forward into subsequent phases. Five packages of experiments based on realistic scenarios were carried out covering power and data interoperability and soldier, vehicle and base integration.

DSEI exhibitor Selex ES provided prime leadership and management for a cross-industry delivery team, including both large and smaller companies. Selex ES is working with the MOD and its industry partners to take the programme forward within a multi-year construct; its continued support is aimed at reducing both through-life costs and improved operational effectiveness.

In addition to RED, the MOD, in partnership with industry, concluded a flight trial in March 2013 to test and demonstrate an integrated defensive aids system "open architecture." Selex ES led a team comprising fellow DSEI exhibitors BAE Systems North America, QinetiQ and Thales.

This architecture enables aircraft sensors and countermeasures to be fitted more easily, allowing rapid enhancement to the protection of front-line aircraft against future and more challenging threats, with increased agility and through-life cost-effectiveness.

"With its international reach, DSEI will attract a vibrant cross-section of key stakeholders involved in defence transformation around the world," confirmed DSEI Event Director, Duncan Reid. "Many of the principles in interoperability and LOSA demand teaming partnerships and collaborations. DSEI 2013 offers a unique opportunity to network within a global context and discuss key trends in this innovative domain."

DSEI will be at ExCeL London from 10th-13th September www.dsei.co.uk



DEFENCE SECRETARY Philip Hammond has become one of only a small number of people from the UK to witness an F-35B Lightning II aircraft perform a vertical landing.

Mr Hammond was at Naval Air Station Patuxent River in Maryland, home to the development test phase of the F-35 programme.

He saw the aircraft, piloted by British test pilot Pete Wilson, take off and, after a short flight, enter a low hover where it remained steady for two minutes to show off its stability in that position, before descending to the runway. The UK will be buying the short take-off, vertical landing (STOVL) version of the aircraft to operate both from land and the new *Queen Elizabeth* aircraft carriers.

After the display, Mr Hammond chatted to programme staff and fielded questions from the media. On the landing he said: "It was fantastic to see it happen. Like everybody else, I've seen the videos of vertical landings on *USS Wasp*. But this is the first time I've seen the aircraft in person landing and it was flown by a British pilot."

Mr Hammond also reinforced the importance of the programme to UK industry. "Thousands of jobs

Defence Secretary Philip Hammond is one of few to see a British F-35 pilot perform a vertical landing. Nic Guffogg of DE&S' Lightning team reports

dependent on this programme and some of the technology that has gone into the aircraft has been developed in the UK," he said.

"Defence programmes generally, and this is one of the most important ones, typically sustain the high end of



our engineering industry and high end development skills and it is crucially important for us to keep that skill base together. The F-35 programme, together with our own Typhoon fighter jet programme, support the skills base and the top end of our engineering industry, and we want to keep it that way."

UK industry provides approximately 15 per cent by value of each F-35 Joint Strike Fighter to be built. With plans for more than 3,000 aircraft across the nine partner nations, the value to UK industry for production alone is estimated in the order of £30 billion between 2009-36, and will account for more than 24,500 UK jobs.

The media continued on to Eglin Air Force Base in Florida where operational testing of the F-35 is taking place. Eglin is home to the UK's first two F-35 aircraft, BK-1 and BK-2, the first two UK operational pilots, and the UK's first 13 F-35 aircraft maintainers. British operational pilot Lt Cdr Ian Tidball then joined two of his colleagues flying F-35s across the cloudy skies of Florida.

After his flight Lt Cdr Tidball praised the jet: "The Lightning II is a great aircraft to fly," he said. "It's extremely responsive with a lot of thrust. The fly-bywire system makes it simple to fly which means the pilot is freed up to concentrate on the objectives of the mission."

Below: the UK's first two F-35Bs are pictured at Eglin Air Force Base in Florida

Far left: Lt Cdr Tidball at Eglin





New kit keeps aircrew ahead of the game

Boots, glasses, contact lenses and body armour are designed for comfort, efficiency and safety

Pilots and aircrew have been quick to praise a host of new equipment introduced by DE&S to make life easier and safer in UK military aircraft. New body armour, combat boots and eyewear will be provided to all pilots and aircrew under a series of contracts signed by DE&S worth around £11 million.

The Body Armour and Load
Carriage System is an aircrew jacket
which can carry soft and hard armour
plates. It is designed to enable the
user to attach pouches which are used
to store essential kit such as a radio,
ammunition and pistol. A lifejacket
option is also available and has an
optional winch hook to be used for
emergency rescues.

It has been bought under a £6 million contract with UK import firm Level Peaks Associates, based in Hereford, and will be delivered to crews later this year.

Glasses, contact lenses and boots are also among the new kit.

RAF Flight Sergeant Baz Reynolds, a Puma crewman who tested the new body armour, said: "The level of ballistic protection offered by the new body armour is fantastic. Fitting and adjusting the jacket is a simple



process and the ability to configure the pockets is great. It's quick and easy to put on too, which is especially important when you need to get airborne in a hurry."

Contact lenses and a new style of glasses for aircrew whose vision needs correction will also be delivered under a £3 million contract with ASE Corporate Eyewear, based in Bodiam, East Sussex.

Designed with flexible polymer arms the lightweight rimless glasses will be introduced to integrate with existing equipment such as helmets and oxygen masks.

And, for the first time, all aircrew will be given the option of wearing contact lenses where appropriate – an option only previously available to a limited number of pilots.

Finally two styles of new aircrew boots are being introduced.

Designed with a flexible sole the boots will provide enhanced sensitivity for use with control pedals and offer more comfort.





Crews will be able to chose from either a black boot suitable for temperate weather conditions or a sand coloured boot designed for use in desert and hot weather conditions.

RAF Flight Lieutenant Calum Law, who trialled the new boots, said: "The boots perform really well. You can feel so much more through the soles than other boots that it really helps with accurate braking and rudder control. Outside the cockpit, they are good too because they give better grip and ankle support."

They will be delivered under a £2 million contract with Turkish company Yakupoglu AS.

Bill Mears, Aircrew Escape and Survival Equipment team lead for DE&S, said the new equipment was a response to advances in technology and updates in threat



Bill Mears, Aircrew Escape and Survival Equipment team lead for DE&S said:

analysis. The body armour, for instance, incorporates new plates covering more of the body than previous equipment while the new spectacles would effectively integrate with other head equipment, vital for those who wear a flying helmet and have a key role in safe operation of aircraft.

"We are committed to improving the safety and survivability of our personnel," he said. "It is essential that we continue to take advantage of advances in technology in providing kit for our aircrews and I am delighted that we are now able to deliver new and enhanced equipment to the Armed Forces."



'Eyes and ears' contract keeps ships and submarines on the lookout

aintaining the eyes and ears of the Royal Navy's fleet of ships and submarines will continue to be done by a joint DE&S/industry team from Abbey Wood after a new multimillion pound contract was signed which will sustain 530 defence jobs across the

The £600 million Sensor Support Optimisation Project will provide a decade of maintenance and repair for 17 different systems across the fleet including *Astute, Trafalgar* and *Vanguard* submarines as well as the Type 45 destroyers, Type 23 frigates and the *Hunt* and *Sandown* class minehunting ships.

The new project (SSOP) builds on the success of Thales UK's Contractor Logistics Support contract, originally signed in 2003, which has provided support to the Royal Navy's sonar and electronic warfare systems for the past ten years

Under the terms of SSOP the inservice support contract has now been extended to include all of the Royal Navy's submarine visual systems, including periscopes for the Vanguard and Trafalgar submarines and the non-hull-penetrating optronic masts for the Astute submarines, previously supported under separate contract arrangements with Thales UK's optronics business in Glasgow.

This means Thales is now providing significant in-service support to the 'eyes and ears' of the submarine fleet, as well as across the major surface sonar and electronic warfare systems.



Pen to paper: Minister for Defence Equipment, Support and Technology Philip Dunne signs the contract with Thales UK chief executive Victor Chavez

Picture: David Tucker

jobs in Glasgow, Manchester, Somerset and Crawley in West Sussex. A further 300 jobs will be secured through the UK supply chain.

Under this new contractual arrangement, DE&S will make an estimated saving of around £140 million over the ten-year period.

Philip Dunne, Minister for Defence Equipment, Support and Technology, signed the contract during a visit to Thales headquarters in Crawley.

He said: "This contract is good news for the MOD and UK industry. Not only will it secure more than 500 jobs across the UK, while delivering savings of £140 million to the taxpayer. It will also





Engineers working on Sonar 2087
Pictures: Thales UK

provide essential support for the combat equipment that helps give the Royal Navy's fleet of ships and submarines a vital technological edge wherever they are based in the world."

Vice Admiral Sir Andrew Mathews, DE&S' Chief of Materiel (Fleet), added: "Securing support for this combat equipment, the electronic eyes and ears of our fleet of submarines and surface warships, is key to ensuring that the Royal Navy will continue to be able to protect the UK's interests wherever they may be."

The contract will be run through the Equipment Support team, which is a joint MOD/Thales UK team. This is augmented by several Thales and J+S Ltd waterfront engineers in the naval bases at Portsmouth, Plymouth and Faslane who together ensure that specialist technical advice and support is provided whenever it is needed to ensure the continued availability of the sensor systems at home and overseas.

Victor Chavez, chief executive of Thales

UK, said: "This contract recognises the value that can be achieved and the savings that can be delivered through a long-term services agreement. It also reflects the successful way in which Thales UK has delivered the required outputs over the past ten years. This project refines that approach to optimise performance over the next ten years, and reinforces our positive well-established relationship with the Royal Navy."

During the previous support contract, the levels of equipment availability improved and overall savings in the cost of support achieved. The new SSOP contract builds on this experience and success, from the outset delivering further savings to the MOD while continuing to deliver high levels of available and serviceable equipment.

Major suppliers to Thales include J+S Ltd (Barnstaple, Devon), MacTaggart Scott (Loanhead, Scotland), Atlas Elektronik UK (Newport, South Wales and Winfrith, Dorset), Parkburn Ltd (Telford, Shropshire), AB Precision (Poole) and Defence Support Group (Sealand, Flintshire). Thales UK will support the project from its sites in Templecombe, Cheadle Heath, Glasgow and Crawley, where ongoing development of these important systems will enable yet further improvements to be made in the levels of capability and availability.



"This will provide essential support for the combat equipment that helps give the Royal Navy's fleet of ships and submarines a vital technological edge wherever they are based in the world."

Philip Dunne, Minister for Defence Equipment, Support and Technology

"You don't need sonar to hear, or a periscope to see, or electronic surveillance equipment to sense that this contract is good news. Good news for Thales and good news for the Royal Navy."

Tony Graham DE&S Director Ships



Marines move into Tamar

ROYAL MARINES of 539 Assault Squadron, previously based at Turnchapel, Plymstock, have completed their final move of personnel, equipment and fast assault boats into their new home at Royal Marines Tamar in Devonport.

RM Tamar is a £30 million project combining operational and training units of small boats, landing craft and hovercraft operated by Royal Marines.

One building will provide headquarters while a second large building will house engineering workshops, with hard-standing and a slipway.

The project was overseen by the Defence Infrastructure Organisation and carried out by Debut Services (South West) to build new waterfront facilities in North Yard including a marina, jetty and waterside services.

Bays make ready to take on multi-national tasks

EQUIPMENT REMOVED from decommissioned Type 22 frigates is to be fitted to three Royal Fleet Auxiliary ships so they can operate in a multi-national task force.

The Tactical Data Link 16 system will provide near 'real time' shared situational awareness for embarked battle staff on board RFAs Cardigan Bay, Mounts Bay and Lyme Bay.

Naval Command tasked DE&S' Situational Awareness Command and Control delivery team to do the work, with the first system installed on *Cardigan Bay*, pictured right, while on station in Bahrain.

"Deployment of an SACC civil servant and contracted personnel from BAE Systems to an operational area was essential owing to the urgency of the project," said Link 16 project manager Rob O'Donnell.

"This is not normal SACC business but, after great effort from the commercial team, logistic hurdles were overcome allowing the capability to be delivered to meet the short timescales of the end user's requirement."

The same project team will be carrying out acceptance trials for the other two *Bay* class ships. Both will be upgraded by the end of the year while alongside in Falmouth.



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The course is accredited at master's level through the University West of England (UWE) and provides delegates with learning credits upon completion of a post course assignment. It is recognised by the Safety and Reliability Society (SaRS) and forms part of an academic award which is approved by the Royal Aeronautical Society (RAeS) and the Institute of Mechanical Engineers (IMechE).

For further information or to reserve a place please contact: Kate Day at course enquiries telephone: +44 (0)1454 662516 ASMT-enquiries@atkinsglobal.com www.atkinsglobal.com/sectors-and-services/sectors/ defence/safety-management-training

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Further dates to be announced in February and May 2014.



New Head's fourth tour in Air Support

AIR VICE-MARSHAL Peter Ewen, pictured right, has taken up his post as the new DE&S Director Air Support, responsible for procurement and through life support of the MOD's large aircraft fleets, air commodity equipment and flight simulation.

He said "I am delighted to have been appointed as Director Air Support. Having already served three tours in Air Support I am very much looking forward to working with the team in meeting the exciting challenges and opportunities that we face.

Chief of Materiel (Air). Air Marshal Simon Bollom, said: "I am delighted to have Peter join the DE&S Senior Management Team. His in-depth knowledge of the business from previous appointments in DE&S and more specifically in the Air Support Directorate will be invaluable in



taking forward this challenging portfolio.

Air Vice-Marshal Ewen's career has included tours at RAF Brize Norton, RAF Brampton and RAF Wittering. His previous roles in DE&S include Project

Director of the Harrier Future Integrated Support Team at RAF Wyton before moving on to lead on the Harrier Transformation Programme and Depth Organisation.

In October 2005 he transferred to the Air Refuelling and Communications Project Team gaining promotion to Air Commodore in 2008.

He then transferred to Abbey Wood as the Nimrod project team leader before taking on the Head Air Intelligence. Surveillance, Target Acquisition and Reconnaissance role in 2011 responsible for Sentry, Sentinel and Airseeker projects.

Promotion to Air-Vice Marshal last January saw him take up a short posting as Chief of Staff Support and Executive Officer in Air Command before returning to Abbey Wood.

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DE&S Talk to the Board is 'Live' at Abbey Wood

MEMBERS OF the DE&S Board held a second Talk to the Board 'Live' session at Abbey Wood on 14th June providing staff with the opportunity to engage face to face and ask questions on any topic that was of concern or interest to them.

Vice Admiral Sir Andrew Mathews, Chief of Materiel (Fleet), said: "I would certainly encourage staff to attend these events. It's an opportunity to meet the Board in a relatively relaxed environment and hear our views on current and topical issues."

Vice-Marshal Julian Air Young, Director Technical, added: "This was my first 'Live' event since arriving six months ago and it was interesting to hear from staff outside my Directorate of issues and challenges they are experiencing in their day-to-day duties.

"As a Board, I consider it our role to help resolve these issues and make changes where required."

Questions to the Board members covered topical issues including:

■ Early release: posts versus people, achieving targets set, forecasting outflow and loss of skills.

- Recruitment: recruiting the skills DE&S is short of.
- Acquisition Operating Framework: removal some information and need to identify a sponsor for publishing requirements/ information. Director Technical acknowledged the potential disconnect since transfer of

Hosting Board members 14th June

- Vice Admiral Sir Andrew Mathews - Chief of Materiel Fleet:
- · Simon Cholerton Chief of Staff:
- · Air Vice-Marshal Julian Young
- Director Technical

the AOF's management from DE&S to MOD Centre, and said he planned a process to 'bridge the gap' and ensure DE&S had sound operating procedures.

New Performance Management arrangements: senior management involvement in setting objectives and dealing with issues including civilian line managers shying away from the 'difficult' conversations when staff are not performing as well as they should.

- White Paper 'Better Defence Acquisition': reference instability the deliverer and requester, a balanced defence budget and more stable programme and getting forecasting accurate.
- Car parking/traffic: alleviating the build-up of morning traffic at Abbey Wood by opening another gate and operating a one-way system in and out of car parks depending on the time of day.

Feedback from staff has also been positive.

One attendee from the Chief of Staff area said: "I was pleasantly surprised at how open the Board members were in their responses and their willingness to take issues away for further consideration.

"Although I recognised all the panel members, these opportunities provide an insight into the different personalities that make up our Board."

will be Sessions quarterly at Abbey Wood. The next one is on 30th October.

Others are planned Corsham (15th July) and Portsmouth (31st July), advertised locally.

BRITAIN'S FLEET of Merlin HC3 helicopters have carried out their final operations in Afghanistan, after nearly four years of support to British Forces.

The Merlins have flown more than 18,000 hours in the dust and heat of Helmand – moving more than 7,900 tonnes of kit and stores and transporting more than 130,000 personnel during that time.

But the number of UK bases in Helmand Province has fallen – from 137 in 2010 to about a dozen this year – meaning fewer helicopters are needed to support them.

The requirement for helicopters in theatre has fallen by around 40 per cent in the past three years. The Merlin fleet and its crews can be returned to the UK.

Gp Capt Frazer Nicholson, Commander of the Joint Aviation Group based in Camp Bastion, said: "Merlin helicopters have proved capable air assets that have tirelessly moved personnel and equipment in a really demanding environment.

"Camp Bastion is nearly 3,000 feet above sea level, dusty, and over 40 degrees in the summer. That environment is incredibly tough on all helicopters but the Merlins have fared well."

After their return to RAF Benson the Merlins will join the rest of the Merlin Force moving to Joint Helicopter Command's Royal Navy Commando Helicopter Force.



Antibiotics for the Forces - the need for speed

THE MOD is looking for innovative ways to speed up development of antibiotics which could support the UK's Armed Forces.

Such development is often lengthy with a high risk of failure so the Centre for Defence Enterprise is seeking fresh ideas from industry and academia.

The MOD has a particular interest as it could protect Forces against bacterial pathogens which they might be exposed to in

different environments across the world and to protect against biological warfare.

The Centre is looking for short-term, proof-of-concept research proposals for innovative techniques, tools and approaches to the early stages of antimicrobial drug development.

The call for proposals from industry and academia will close on Thursday, 29th August.

Subject Matter Experts in the Acquisition and Delivery of Geospatial IM/IX Capability

Geospatial Information Management and Exploitation (IM/IX) is an essential component of C4ISR systems underpinning Information Superiority and to support the Decision Making process.

Helyx provide services across the acquisition and delivery cycle. These include R&D to develop concepts, consultancy services to support the acquisition process and the design, developm ent, delivery and acceptance of geospatial systems across Defence. We also provide onsite support in the delivery of geospatial services including geospatial analytics and a Training consultancy. This gives us unique insight into all aspects of geospatial capability across Defence, the benefits that can be realised and it's utility to support specialist and wider communities of interest.

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- Concept and Programme Development
- System and architectural modelling



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JOHN TAYLOR, the MOD's Chief Information Officer, addressed DE&S managers and information professionals at a lunchtime seminar at Abbey Wood on 30th May, one of a series run by the Defence Academy under the Defence Transformation programme.

Mr Taylor, pictured left, outlined challenges the MOD faces in the world of information technology and the financial and commercial constraints associated with information and communication technologies.

He outlined how the MOD is addressing these challenges to improve coherence, performance and end user experience.

In his summing up, Mr Taylor said: "There remain considerable challenges in the information and communication technology enablement of modern business but there are also huge opportunities for us

PowerPoint slides are available and to register interest in viewing the video recording from Defence Academy, e-mail admin.hq@defenceacademy.mod.uk

Trials take the heat out of replenishment at sea

TRIALS HAVE started on a new, bespoke facility that will be used by Royal Navy and Royal Fleet Auxiliary (RFA) sailors to learn how to transfer vital supplies from ship to ship while at sea.

The facility has been built under a £25 million contract with the equipment provider, Bristol-based Rolls-Royce Power Engineering.

The replenishment-at-sea (RAS) facility at HMS Raleigh, Cornwall, features Queen carrier, Type Elizabeth destroyer and Type 23 frigate RAS reception points and an RFA delivery ship structure that includes a 25-metre steel mast as part of the delivery system that connects the platforms together with a tensioned wire to carry the replenishment loads between ships.

Sailors will use the facility learn transferring fuel, munitions and general stores from one ship to another while afloat which can take place in all weather conditions, day or

It also includes the new Heavy Replenishment At Sea (HRAS) demonstrator technology system which is being used to test new RAS equipment to provide uprated capability for the new Queen Elizabeth carriers transferring loads up to five tonnes at a high tempo.

The new equipment will allow for around 1,000 tonnes of vital supplies to be transferred in one evolution - more than double the current weight load.



HMS Raleigh

large stand-alone diesel generators, supplied by Aggreko, will provide the 2.5mw of electricity to enable the system to operate with a motion simulator system.

Commodore David Preston, Head of Commercially Supported Shipping at DE&S, said: "Replenishment at sea is a very important capability and allows ships to remain on operations for long periods with no additional support.

"It is also one of the most hazardous seamanship tasks the Royal Navy and Royal Fleet Auxiliary engages in and so the

training we provide must be of the highest standard.

"This demonstrator will allow us to develop safe operating procedures for the new range of heavy replenishment equipment that will be fitted to future RFA ships.

"On completion of the demonstrator trials the facility will be converted to provide the most up to date training system for replenishment operations in the world."

The training facility is on schedule to be fully operational next year and will provide RAS training for the next 25 years.

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The Policy, Strategy and **Parliamentary** profession launched last year to develop people within the cadre. The Defence Policy, Strategy and **Parliamentary Base Camp** course at the Royal College of Defence Studies in London takes MOD civilians at Bands B and C. Philippa **Benton** of DE&S **Secretariat** attended the latest

■ The PSP team has launched the Defence Policy Guide to provide officials with practical help through the process of developing policy. The guide and information on other tools, news and initiatives are available on the PSP webpage. Further information on that and future Base Camps is available from DSP-PSP (multiuser)

A view from Base Camp

'HAVING MOVED to DE&S
Secretariat after three years
in Finance, I applied for a
place on the PSP Base Camp to
ground myself in this new and
unfamiliar world. I arrived at
College on the Monday with
little real concept of what Policy,
Strategy and Parliamentary
professions actually meant, but
left on the Friday with this gap
in my knowledge filled and a
new appreciation for the sheer
breadth of fascinating work that
PSP encompasses.

Base Camp is five days of lectures and

very short period.

An example of one of the practical exercises was a mock National Security Council to tackle the rise in cyber crime. Each individual was allocated a government department to represent, half an hour was allowed for inter-departmental engagement and then a Council meeting was held to reach a consensus. It brought to light just how many players there are in any particular decision and how difficult it is to reach a decision that is favoured by the majority.

One of the most obvious benefits of

following each lecture, there were opportunities during breaks to chat. Emphasis was on developing a network of PSP people you could call on for help in your day job, but also for development opportunities or advice on future job moves.

It is also a real demonstration of the commitment of senior staff to the PSP cause. Speakers, largely from the Senior Civil Service, take time out of their busy schedules, but each camp also has a 2* 'Sherpa' present for the week. They act as facilitator during the week and, perhaps more importantly, an extra source of valuable advice

and amusing anecdotes.

We were lucky enough to have as our Sherpa Paul Lincoln, Director of Resources and Policy at Joint Forces Command, who was an invaluable presence throughout.

I took away other benefits. Since I am a newcomer, I appreciated the first-day back-to-basics definitions of policy and strategy, the differences between them, and their importance in the workings of a government department.

Secondly, having sidestepped from Finance to Secretariat, I was reassured by confirmation of the interdependence of different functions and that financial skills and awareness are fundamental to effective delivery of a policy through strategy.

Finally, working outside Head Office, it is easy to feel detached from the core of the department. The camp helped to rebuild connections and the sense that we were all working towards the same aims.'

practical

practical
exercises, each day with a
central theme – for example,
'Enduring solutions to
intractable problems: creating
innovative policy' and
'Defence beyond our shores:
international institutions
and alliances'. Themes and
practical exercises help focus
and apply what could otherwise
be an overwhelming volume
of information received over a

attending
the course is the
opportunity to engage with
high calibre speakers. It also
provides an environment
to meet and make valuable
links with 30 or so attendees
from all areas of the MOD,
as well as the Foreign and
Commonwealth Office. In
addition to lively discussions

'Improving recognition, development and management of policy, strategy and secretariat skills is an important initiative and we're behind it. PSP isn't just a Main Building idea but covers skills and roles throughout defence' – John Amer, DE&S Policy Secretariat deputy head

Heritage hunt is Devonport success THE NEWLY-REFURBISHED
Devonport Naval Heritage Centre
attracted more than 1,200 visitors
during the inaugural Plymouth
History Festival.

Intrigued visitors, including base staff and families, poured into the base on the two open days, to learn fascinating historical facts from

'behind the dockyard wall'.

There were also guided tours by the heritage volunteers and themed talks on subjects such as crime and punishment in the 18th and 19th centuries which highlighted Plymouth's rich history and heritage.

Naval Heritage Manager, Warrant Officer Adrian Boswell. said: "The days gave us the rare opportunity to throw open the naval base gates to the public as part of the city's history festival. This gave us the chance to showcase our rich heritage collection to hundreds of people who were fascinated to see what lies behind the naval base wall."

DE&S staff join birthday honours list

COMMODORE DAVE Preston of the Royal Fleet Auxiliary joins an impressive list of DE&S staff recognised in the Queen's Birthday Honours List.

Preston. Commodore pictured right, has received an OBE for achieving excellence in engineering.

He is currently head of Commercially Supported Shipping in DE&S Ships, responsible for acquisition and in-service support of all the Royal Fleet Auxiliary, ice patrol and hydrographic ships, as well as offshore patrol vessels and all MOD yachts and boats.

Commodore Preston, 57, of Exmouth, said: "I believe this award recognises the importance of the RFA and in particular its engineering cadre in delivering real value to UK defence operations.

"Over the past decade my team at Abbey Wood has made real advances in delivering cost effective acquisition and support solutions and without doubt they have proven to be the most flexible, agile and innovative group I have ever worked with."

He is joined in the list of OBEs by Wg Cdr John Walsh, assistant head of Typhoon in the Fast Air Support Team, and Stephen Glass, head of Crypto and Cyber, who was nominated for services in Special Projects

Captain Matthew Harrison of Ships Support Alliance in DE&S Ships is also honoured for services before joining DE&S.

Among staff at DE&S honoured with an MBE are Chief Tech John Fellowes, a capability manager with the Chinook team, Josephine Pownall of Defence Clothing, Captain Adrian Thorpe, formerly of Defence General Munitions.



and Andrew Wright of British Forces Post Office.

MBEs also go to Sqn Ldr Colin Brown of Unmanned Air Systems, Major Richard of Bowman Craig Tactical Communication and Information Systems, and Major Simon Perrett of SANGCOM, all for services before joining DE&S.

Industry awards sponsored by DE&S include Iain Evans of LEK Consulting, James Trial of Raytheon Systems and KBR's Gareth Jones.

Meeting the cyber challenges

REPRESENTATIVES OF the MOD have met key suppliers to discuss cyber security.

Air Vice-Marshal Jon Rigby, Director Cyber Intelligence and Information Integration, said: "Our cyber security requirements are changing as the threat evolves and we need a partnership with industry which can match the pace of this change.'

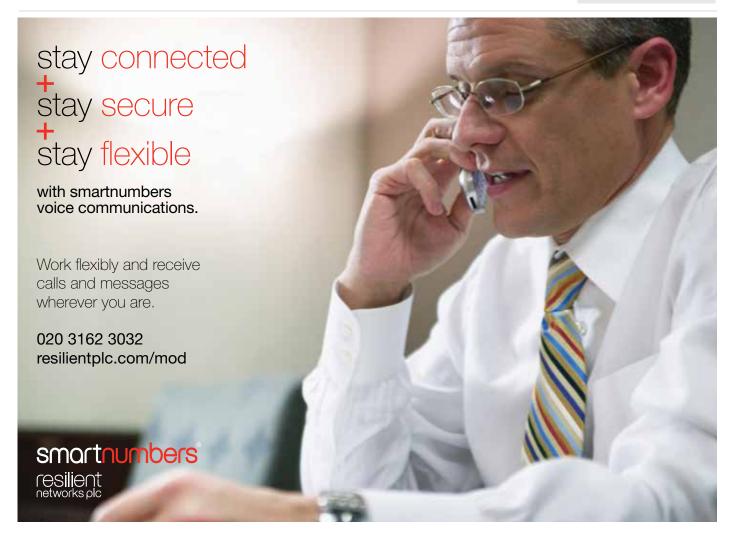
The MOD has already:

☐ created a new Joint Forces Cyber Group;

a established new training structures which ensure cyber awareness for Forces and civilian personnel;

☐ invested to improve cyber defences;

☐ laid the ground work for a new Joint Cyber reserve to draw on a broader range of skills and expertise from industry and the public.





Abbey Wood go through the drills, above, while Tom Sheehan and Scott Wain receive the cup from Air Vice-Marshal Young, assisted by Ethan and Maya Wain

> Pictures courtesy of Claire Rossiter

Wood's field gun team members put their backs into their triumph at HMS Collingwood, above

Abbey Wood races its way to glory

FIVE WEEKS of tough training paid off as Abbey Wood's tri-service crew took a major award at the annual field gun competition at HMS Collingwood.

The DE&S headquarters team won the Sports Lottery Cup for winning the Plate II final, following seven qualifying runs against the clock the day before finals day.

The crew took to the arena in front of 5,000 spectators against four other crews in the contest which sees a one-tonne field gun and limber taken apart and put together again in the middle of a series of lengthy sprints before the final drag to the finish line.

Abbey Wood's crew members were quickly into their drill and had established a clear lead at the half way point which they held to the finish in a season's best time of one minute 28.13 seconds. With no penalties to add on, Abbey Wood were declared the winners.

The cup was presented by DE&S Director Technical, Air Vice-Marshal Julian Young and collected by crew captain Lt Tom Sheehan and POPT Scott Wain, assisted by Scott's son Ethan and daughter Maya.

Formed in 2003, the Abbey Wood crew has become an established tri-service crew. This year's crew represents a mix of all three services led by CPO Brian Bell, the number one trainer.

For the last few years the team has competed with the highest average age in the competition, partly due to the level of seniority required to hold a post in DE&S.

Twenty-one teams from across the

UK Armed Forces took part in the annual Royal Navy and Royal Marines charity event with the elite competing for the Brickwoods Trophy.

In the final, defending champions

Portsmouth naval base were edged out by HMS Heron with HMS Excellent taking

The HMS Heron crew also won the trophy for fastest single run.

And Corsham blazes a field gun trail too



the competition's 'Soapy Watson Trophy' while Lt Dave Bebbington, pictured right, was presented with the Endeavour Cup for the efforts in generating the inaugural crew.

The crew was a mix of military personnel at Corsham and nearby units with representation from several business units within Corsham, 600 Troop (15 Signal Regiment), and 241 Signal Squadron (10 Signal Regiment).

All ranks, rates and services were represented from a Royal Navy Captain to Force.

Just four of the 23-strong crew that

went to Collingwood had previous experience of a Field Gun competition.

The races were watched by Information Systems and Services' new director Gerry Cantwell who said: "I was immensely impressed by the commitment, courage and energy shown by the team. The team did ISS and everyone based in Corsham proud."

THE SAILORS of the Defence Engineering and Science Group - a crew dominated by DE&S have ended four years of Met Office dominance in the interdepartmental offshore sailing regatta off the south coast.

The crew, skippered by Simon Owens, was a mixture of the experienced through to the novice. They collected the overall trophy along with the inshore, offshore and pairs competition awards in a spectacular week of dominance.

In their yacht Faux Pas from the River Hamble the crew got off to a winning start in the Monday afternoon race to Cowes.

Tuesday was held round the Isle of Wight where an early lead heading west along the Solent was lost after passing The Needles and DESG finished fourth in a respectable nine hours and nine minutes, around two hours quicker than the slowest yachts.

Wednesday began with a second win of the week in an offshore race to Christchurch Bay and back, followed by a second place in an inshore race.

Thursday's inshore races saw two firsts and a second to win the overall title which was presented at the Royal Corinthian Yacht Club.

Friday completed the regatta with a return to the River Hamble, DESG finishing in third.

The team's only crushing defeat came in a quiz during a midweek dinner hosted by the Island Sailing Club where they finished last!

Team makes a splash to end Met Office reign



Title winners DESG - back row, from left: Emily Sharp, Matthew Bunney, Geoff Spruell, Kevin Foreman, Tim Andrewes. Front: Andrew Duniec, Tim Matthews, Simon Owens (skipper)

DESG HONOURS

- ☐ Eric Seal Memorial Trophy for the boat scoring least penalty points in combined results.
- The Rutherford Appleton Trophy for the winner of the offshore races. ☐ The Amaranthe Salver for the winner of the departmental entries
- combined inshore and offshore.
- Class A Shield and Cariad Cup (paired with SOCA B) For the pairs team with the lowest combined inshore/offshore points.
- ☐ The City of Plymouth Trophy For the winner of the inshore races.

TWO DE&S teams have presented £500 to two charities. The Short Range Air Defence (SHORAD) and

Maritime and Air Weapons (MAWS) project teams raised funds throughout the last year and Lyn Richardson (SHORAD), second from the left in the picture, presented a cheque to staff at the Peggy Dodd Centre

The centre, where Lyn's sister Kim, second from right, works, supports those who care for people with memory loss.

The teams were also able to send £500 to the Wiltshire-based Fatboys Cancer Charity. Chief Petty Officer Jess Chapman (MAWS) nominated the charity after hearing about its work helping children suffering

SHORAD and MAWS contain around 140 staff and each year the teams' charity committee nominates causes to support. The money was raised from a weekly bonus ball draw, regular raffles and quizzes.

Lieutenant Paul Greason from the committee said: "I am extremely grateful for the support we receive from SHORAD and MAWS team members and our friends who regularly support our fundraising efforts.

'We are pleased to be able to make a contribution to help these two worthy charities continue their sterling work in the local area.

Combined efforts help west country charities



BFP0 staff get out and about

STAFF FROM **British Forces Post** Office have been sprucing up the community around their headquarters at RAF Northolt.

Inspired by Warrant Officer 2 Mark Gwilt the team offered a day's work to support the community through the Hillingdon Association of Voluntary Services.

The Harlington Hospice laid down a challenge to spruce up the hospice shops 'changing rooms-style' around Hillingdon Borough.

A hospice shop in Ruislip was the first to get an overdue splash of paint. Flaking, rusty red paint was replaced with fresh, eyecatching blue and white colours of the hospice.

A second shop in Ruislip Manor had kitchen, lavatories, storage area and customer desk transformed by WO2 Kevin Bennett and Sgt Seremaia Malawakula.

Lieutenant Colonel Colin Code, WO1 Jason Crilley and Sgt Stuart Paton revamped the Ickenham shop by fixing a leaky roof and painting the rear wall of the building.

A further three soldiers from BFPO mended and painted broken fences at the Harlington hospice.

Major Mark Lloyd said: "BFPO has a history of supporting the local community. The team willingly supported this venture by giving up a day of their leave to carry out this project."



AROUND 50 cyclists, known as the Bristol DESpots, set off from Abbey Wood last month to take part in a Help for Heroes fundraising event.

The cyclists, led by Colonel Mike Ross, leader of the Defence Clothing team, entered the 2013 Hero Ride, cycling from Bristol to Blackheath and then Horseguards in London to join up with the final stage of the Paris to London Big Battlefield Ride on Sunday, 2nd June.

The team was one of many riding from across the United Kingdom to show support and solidarity for the injured service personnel completing the ride.

The DESpots received sponsorship in the form of team clothing from Coneen Group and Iturri, nutrition from Vestey, support vehicles from Babcock and spares and a bicycle mechanic from Evans Cycles.

Cyclist Adam Sutch said: "The actual ride, via Swindon and Northolt, was superb: a varied route to cater for the super-fit and also to push the less experienced. We had great weather and saw some of England's finest lowland scenery.

"A bicycle was the ideal choice for the journey via that route if anyone is considering an event for charity, I cannot recommend a team bike ride too highly."

The DESpots collected more than £11,000 for Help for Heroes, much of it through the generosity of DE&S and other colleagues. Altogether there were 1,300 participants in the national event, covering a total of 228,000 miles.

Among those who met the cyclists at the finish was Tour de France sprinter Mark Cavendish who welcomed them home with praise for all the cyclists' dedication.

Abbey Wood team rakes in charity cash on Hero Ride to London



SNOWY VISTAS and scarily fast descents in the French Alps marked the final leg into Monaco for two DE&S cyclists raising cash for spinal cord research foundation Wings for Life.

James Kirk of Special Projects CISR and Unmanned Air Systems deputy team leader Henry Prag completed a 930-mile unsupported ride from Bristol over seven days towards the end of May, raising £1,800 for the charity.

Having ridden from Land's End to John O'Groats together in 2006, also in seven days, the two were up for the increased physical and mental challenge.

The ride began with 173 miles to Ashford in Kent. Days 2, 3 and 4 involved working 400 miles south through the rolling hills of France in relentless wind and rain.

Two 120-mile days over the French Alps took place in sunshine. Col du Lautaret

(2,058m), Col de Vars (2,108m), and Col D'Allos (2,250m) were spectacular mountain climbs, well known to riders in the Tour de France.

James said: "We are really pleased to have raised so much money for such a worthy charity. We have received tremendous support from colleagues, friends and family for what has been a significant life achievement for both

"The continuous messages and words of encouragement really helped focus the mind and body when we both had to dig very deep on those long, cold, wet and windy days."

Henry added: "Those long days in the rain in northern France were really gruelling but they were all but forgotten once we climbed into the Alps and spent two days in fantastic weather on the best cycling roads we have ever ridden."

Civilians take honours as 'Ryder Cup' comes to DE&S



ABBEY WOOD'S civilians won the inaugural 'Ryder Cup' with victory over the military at the Vale Resort in Glamorgan.

Forty six golfers took part in the match, which will become an annual part of the sporting calendar at DE&S

Lt Cdr Steve White and Mr Richard Littlewood led the two sides in a contest played over a morning team format and a singles competition in the afternoon.

Many matches were only settled on the final green while pride of place on the course went to Capt 'Tek' Tekbahadur for a 168-yard hole in one.

The post-match presentations were formally opened by Mr Bob MacNaught who piped everyone into dinner where a raffle raised £220 for the British Limbless Ex-Servicesmen's Association.

Anyone interested in playing next year should contact DES Ships CSS-Boats1b (Clark, Iain Mr) if you are civilian, or MAA-Cert-MPS1a (Smith, Daz Flt Lt) if you are a serviceman.

DSRA LOTTERY WINNERS April

£10,000: Jacqueline Bone (Innsworth). £5,000: Christopher Symonds (Thatcham). £2,000: Mark Thomas (York). £1,000:Mark Waite (Bicester). £500: Anita Harrington (Corsham). £300: Kelly Lusted (Shrivenham), Janet Tokley (Wethersfield), Dawn MacMillan (Brampton), Andrew Farley (Wareham). £200:

Myles Johnston (Lisburn), Neil Herridge (Abbey Wood), Anthony John (Brampton), Garry Martin (Devonport), Debbie Hollands (UKHO), Michael Remlinger (Devizes), Abigayle Munslow (Abbey Wood), Peter Binks (St Athan), Darren Walsh (Holywood), David Fairbrother (Exeter), Mags Lambert (Abbey Wood). £100: Elenor Mole (UKHO), Terry Harper (Devonport), Colin Maclean

(Craigiehal), Stefan Povey (Bicester), Kim Simpson (Abbey Wood), Clare O'Mara (Abbey Wood), Tikendra Dewan (Aldershot), Brian Gordon (Leeming), Mark Bullock (Okehampton), Jayson Young (Salisbury), Polly Lees (Abbey Wood), Terrie McDonald (Tidworth), Maureen Cundall (Whittington), Robert Hanson (Whittington), Caroline Howells (Whitehall).

5 - released this month

Defence Instructions and Notices (DINs) are defence-wide instructions, quidance 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:

2013DIN04-073: This DIN covers support to military training and exercises provided by out-of-port vessels and details the tasking process, the notice periods required for tasking and a list of approved tasks within the Statement of Requirement.

2013DIN04-075: All holders of MOD-owned Registered Numbered Equipment assets are reminded to account for movement transactions on the Management of Equipment Resources, Liabilities and Information Network (MERLIN).

2013DIN04-082: Health monitoring test equipment has historically been calibrated by a unit submitting an 8800 to the Medical and General Supplies Equipment Support 5 (Repair Manager) who has then raised a contract with the delegated company to perform calibration. A new way of calibrating equipment was launched on 5th June.

Further information and more details on the latest DINs see: http://defenceintranet.diif.r.mil.uk/Reference/DINsJSPs/Pages/DINsindex2013.aspx

