

desider

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MINISTRY OF DEFENCE

the magazine for defence equipment and support



Taranis - unleashing the 'god of thunder'

DE&S HR supplement and Equipment Capability Sponsor wallchart [See inside](#)



Arizona dreamin'



New kit to help train police



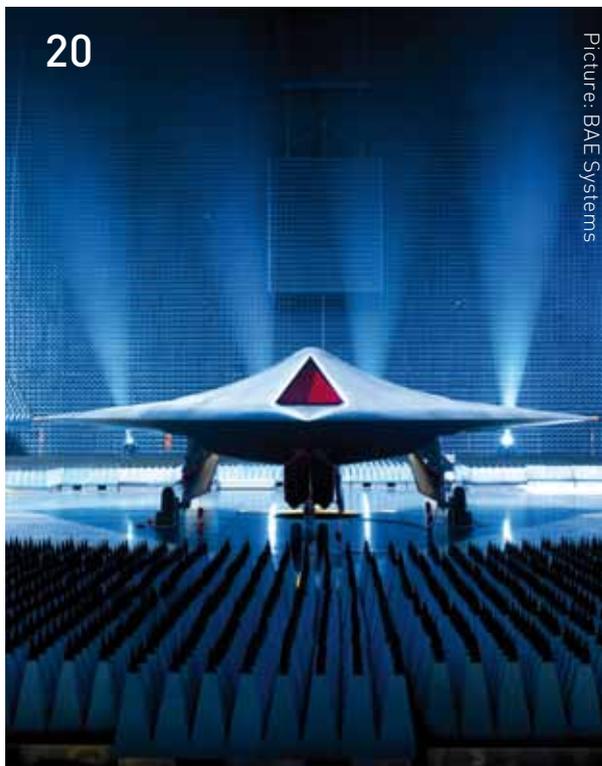
A400M pays a home visit



Sea Viper passes test



Big ideas earn rewards



cover image

It looks state-of-the-art, and Taranis is set to demonstrate that it can be the unmanned combat aircraft of the future. Onlookers at BAE Systems saw Taranis – named after the Celtic god of thunder – emerge from its three-and-a-half years of development at the company’s Warton plant

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desider

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General Sir Kevin O'Donoghue Chief of Defence Materiel



I make no apology for returning to the theme of our support to current operations, which remains our main effort. More than 5,000 staff in DE&S are now directly involved in supporting main effort current operations with nearly every Operating Centre playing a significant role.

We continue to provide essential support to countering the IED threat. Terrific strides have been taken, and continue to be made, in supporting fleets in theatre. Performance is impressive, with more than 200 deliveries of Urgent Operational Requirements to theatre in June and July alone.

Much of what we deliver through Land Equipment is very familiar from the pages of *desider* and the wider media, including Protected Patrol Vehicles hand held infantry weapons and, more recently, coverage of the development of the Light Protected Patrol Vehicle which promises to be revolutionary. But we should not forget the wider spectrum of less eye-catching work including the delivery of munitions and complex weapons such as Brimstone.

I was very pleased to see that the "Idea of the Year" at this year's GEMS award was put forward by three members of DE&S' former Attack Helicopters team, Cdr David Bartlett, Major Mike Jeavons and WO1 Austin Harding. They suggested changing the way these vital aircraft are maintained, which means flying hours on operations have been increased, money saved and the transfer of Apaches back to the UK for maintenance reduced.

I could not think of a clearer demonstration of the very close involvement of DE&S personnel in support to operations and the benefits this involvement brings to the front line.

Away from Operation Herrick, we continue to meet the needs of Front Line Commands and PJHQ to enable them to defend the UK and its interests. The Royal Navy, as well as providing the Continuous At Sea Deterrent, continues to sustain operations worldwide with DE&S support.

More recently units operating on the Auriga deployment, an exercise designed to demonstrate robust maritime logistics in an expeditionary environment, have completed exercises off the US. Closer to home, RAF Typhoon UK air defence duties, conducted from RAF Coningsby, will be extended from autumn 2010 when RAF Leuchars stands-up as Typhoon's second Main Operating Base.

After support to operations, the Strategic Defence and Security Review (SDSR) is our next priority. A key area of the work is the SDSR Policy and Capability Study on Support, looking at improvements to support of the Armed Forces and their equipment. DE&S project teams, alongside Front Line Commands and industry partners, are continuing to contribute heavily to this element of SDSR.

Beyond SDSR, DE&S is involved in other areas which may shape future programmes, not least the

Value For Money study into the future nuclear deterrent, to which the Future Submarines team and others in the Operating Centre have been contributing. The Secretary of State, speaking at the Farnborough International Air Show, reiterated his commitment to the Defence Acquisition Reform Programme and the need to define and then maintain a programme that is affordable in the long-term and sustainable year by year.

During his visit to Farnborough I am sure Secretary of State will have seen a very impressive flying display by the A400M transport aircraft on which flight tests continue. The aircraft has also landed for the first time at its planned operating base, RAF Brize Norton

I know that the uncertainty engendered by the many studies underway, with the prospect of reducing manpower numbers, raises questions about DE&S. Whatever the future, I and my Board are clear that we must remain at all times safe and professional and we will keep under close and regular scrutiny our ability to continue to deliver on all fronts. This is why, despite the introduction of civil service wide restrictions on external recruitment which reinforce the strict control regime we have in DE&S, some external recruitment will be needed for us to continue to support operations and remain safe and professional. The recruitment of apprentices and graduates will also continue. The Recruitment Reference Group will continue to review requests for external recruitment

Due to the current focus on operations, it is sometimes possible to overlook DE&S' work to develop technologies for use well into the future. I was very pleased to see the media attention given to the futuristic and world-leading Taranis prototype unmanned combat aircraft. This a hugely exciting programme developed in a partnership of DE&S and leading UK industries which may be a pointer to future aerial warfare.

A significant event at the end of July was the removal of the last agency within DE&S as the Defence Storage and Distribution Agency (DSDA) relinquished agency status after 11 years' duty storing, maintaining, issuing, processing and distributing materiel for the MOD. Since 2006, when it launched a major efficiency programme, DSDA has successfully delivered savings of more than one third in operating costs and staff numbers as well as fundamental improvements in service levels. We will now work to build on this track record of success with the removal of agency status enabling the Joint Support Chain to further improve and streamline end to end support.

Finally, I am sure that many of you are looking forward to a well-earned summer break. I hope you all enjoy your leave and return refreshed to face the continued and fulfilling challenge of supporting operations now and in the future.

NEWSREEL



Sir David steps up

GENERAL Sir David Richards, above, is to take over from Air Chief Marshal Sir Jock Stirrup as the next Chief of the Defence Staff in October. It has yet to be decided who will take over from General Richards as Chief of the General Staff. Born in 1952 the General was commander of the International Security Assistance Force in Afghanistan between May 2006 and February 2007 and took over as Commander-in-Chief UK Land Forces soon after. He has been Chief of the General Staff since last year.

Argus tested

NEW medical equipment as part of a £37 million update on *RFA Argus*, the Royal Navy's primary casualty receiving facility, has been tested for the first time in a large-scale exercise off the south coast. Upgrades included a CT scanner, which provides 3-D X-ray imagery of patients, a state-of-the-art oxygen concentrator and new digital imaging and laboratory investigation equipment. A new ramp allows safe movement of casualties to the flight deck and a new system for rapid evacuation of 600 personnel in less than 30 minutes.

Ship shines

Diamond's second set of sea trials were successfully completed 24 hours ahead of schedule. Trials on the Type 45 destroyer included a 72-hour endurance test of the entire combat system plus power and propulsion plant.



An Afghan policeman at a vehicle checkpoint with a member of the Queen's Royal Lancers

More kit on way to help Forces beef up Afghan security

- £158 million for equipment such as ground-based surveillance and communications systems to make bases more secure;
- £19 million for personal equipment, including Osprey body armour and helmets, light and heavy machine guns, combat shotguns, and more night vision equipment;
- £12 million to bring MAN logistics support vehicles up to theatre entry standard.

DE&S WILL be providing more equipment for training of Afghan security forces after extra funding was announced by the Government.

Defence Secretary Dr Liam Fox unveiled another £189 million on 7 July to help British troops build a secure future in Afghanistan. The money will go towards more Osprey body armour and helmets, machine guns, surveillance equipment and communications.

Dr Fox announced the extra funding in a statement to Parliament that, with the £67 million recently announced by the Prime Minister, brings the total of extra funding to Afghanistan to £256 million since June.

"This underlines the Government's commitment to ensuring our forces have all they need to deal with the ongoing threat in Afghanistan," said Dr Fox.

The Chief of Defence Staff, Air Chief Marshal Sir Jock Stirrup, added: "This extra funding will provide our troops with further equipment and force protection which is important for their security and effectiveness as they go about their work in training the Afghan National Security Forces.

"This is a key task which is of course essential in preparing Afghan forces to take responsibility for the security of Afghanistan."



Minister goes to (Thursday) war

MINISTER FOR the Armed Forces Nick Harvey went to 'war' in the west when he witnessed an exercise at sea with the Royal Navy.

The North Devon MP was guest of Rear Admiral Chris Snow, who heads the Flag Officer Sea Training organisation in the DE&S-administered naval base at Devonport.

Mr Harvey was on a fact-finding mission to see the Thursday War, the weekly exercise which prepares ships and submarines for operational deployments.

Scout will help Army track down the enemy



New vehicle offers greater firepower, more protection and enhanced mobility

SEVEN PROTOTYPE Scout vehicles are on their way as the beginning of a new generation of armoured fighting vehicles for the Armed Forces.

The seven and their training equipment are for the demonstration phase, a £500 million contract between DE&S and General Dynamics UK.

The powerful, sophisticated Scout vehicle will provide improved protection against a wide range of threats.

It will boast greater firepower, improved situational awareness, more protection and enhanced mobility.

It will carry three crew and mount a new type of 40mm cannon and a machine gun and will eventually replace the Scimitar armoured vehicle.

Peter Luff, Minister for Defence Equipment, Support and Technology, said: "Military commanders have stressed the importance of having a wide range of vehicles from which they can select the most appropriate for specific tasks.

"This contract is a major step towards providing an additional fleet of combat vehicles, capable of undertaking operations in the most demanding terrain and fully incorporating lessons from current conflicts.

"Work on this phase of the programme will go ahead alongside the

wider Strategic Defence and Security Review which will make sure that the capabilities that we are investing in are those best placed to provide the security we need for the future."

The design is derived from modifying the Ascot tracked vehicle, which is already in service with some Nato nations. It is well-proven and suitable for export sales.

Work will continue alongside this programme to update existing armoured reconnaissance vehicles in service in Afghanistan, such as the Scimitar, to maintain their operational capabilities.

Chief of Defence Materiel, General Sir Kevin O'Donoghue, said: "This announcement is the result of months of hard work by a wide range of stakeholders across the MOD and General Dynamics UK enabling us to reach this point, ahead of the original plan.

"The work that has been done has been, and continues to be, subject to the most careful scrutiny to ensure the decision is the right one for the long-term needs of the Army."

The Army will be heavily involved in the project from the start, particularly in the exhaustive trials with prototype vehicles, which are expected to start in 2013.

When this phase ends the MOD will be in a position to place a production contract.

General Dynamics UK, of Newbridge, Gwent is working with Lockheed Martin UK, Bedford as they are principal sub-systems supplier for the turret, and CTAI (a joint venture between BAES and Nexter) for the weapon system.

The principal sensor supplier has not yet been announced.



Above: Peter Luff, front left, puts his signature to the contract with General Dynamics on behalf of DE&S

Artisan on track for future carrier work

NEW RADAR which will track aircraft operating from the Queen Elizabeth aircraft carriers is being tested on the Isle of Wight.

Artisan 3D is undertaking trials on the full-size mock-up of the carrier's superstructure. This will enable it to operate effectively close to other surveillance and communications systems.

Artisan is a new medium range radar which provides surveillance, target tracking, back-up navigation and identification friend or foe capabilities to the UK's Type 23 frigates. It will also be fitted to amphibious ships such as *HMS Ocean*, *HMS Albion* and *HMS Bulwark*.

With modern targets smaller and quicker, the new radar is better able to distinguish between targets and background clutter, particularly over land.

With completion of the radar's Customer Critical Design Review, BAE Systems and partners are taking the £100 million programme, which carries a ten-year support element, into full production.

Capt Howard Holdsworth, leader of DE&S' Short Range Air Defence team, said: "After a challenging year, the completion of the review represents a significant achievement for BAE Systems Integrated Systems Technology and DE&S teams, and sets a firm foundation for the manufacture phase to begin. The delivery of Artisan is keenly anticipated by the Royal Navy, bringing with it improved performance at a lower through-life cost."

The first ship fitted with the replacement radar is likely to be a Type 23 frigate. *HMS Queen Elizabeth* will be fitted with her Artisan 3D radar during final assembly in Rosyth.

The Army view . . .

Master General of the Ordnance, Major General Bill Moore, said: "This is a very good moment for the Army. Scout will provide a much better capability to find and track the enemy, so necessary for the successful prosecution of operations in the 21st century."

NEWSREEL

Ship handover earmarked

HMS SOUTHAMPTON is due to be handed over to the Disposal Services Authority later this year. The Type 42 destroyer, which left Royal Navy service in February 2009, is berthed at Portsmouth where essential equipment is being removed for use on other operational Type 42s. Options for her disposal remain under review, Peter Luff, Minister for Defence Equipment, Support and Technology has revealed in a parliamentary answer.

DE&S costs

THE estimated cost to the public purse in financial year 2010-11 of equipment programmes managed by DE&S is approximately £16.54 billion. This is made up of £13.88 billion for the core MOD programme and £2.66 billion in support of current operations, figures have revealed.

Job creation

WORK on the Queen Elizabeth class aircraft carriers will create or sustain a peak of 7,000 to 8,000 jobs at shipyards in Glasgow, Rosyth, Portsmouth and Devon, according to figures released to Parliament. A further 2-3,000 will be created or sustained in the UK supply chain. Construction and commissioning work is due to complete by the end of 2018.

Typhoon jobs

THE Department for Business, Innovation and Skills says a minimum of 8,600 UK jobs should be sustained by the Typhoon programme, Minister for Defence Equipment, Support and Technology Peter Luff has told Parliament.

Main picture: A400M, on the right, lines up with C-130 and C-17.
Inset: A400M touches down at Brize Norton
Pictures: Andrew Linnett



Touchdown!

A400M makes an early visit to its future RAF home



A400M, THE next generation military transport aircraft, made its first visit to the UK when it touched down at RAF Brize Norton, its future main operating base, for a photocall with a C-17 and C-130J.

The A400M prototype aircraft achieved first flight on 11 December 2009, with the second and third prototypes following on 8 April and 9 July this year. Flight trials are

progressing to target with more than 100 test flights and 400 flying hours clocked up so far.

The A400M made its first public appearance in Berlin on 10 June, and was a popular visitor at the Royal International Air Tattoo at RAF Fairford and the Farnborough International Air Show in July, impressing with its agility and handling.

In terms of size, A400M sits between C-130J and C-17,

can operate tactically and strategically, and has superior all-weather and low flying capability.

Designed to carry the ever growing range of 30-tonne class armoured vehicles vital to protecting UK troops from roadside bombs, its tactical, rough landing strip capability will allow it to take them directly into theatre. First UK deliveries are planned for 2014.

FIVE HUNDRED sorties and 500 flying hours have been completed on the RAF's Hawk Advanced Jet Trainer.

The RAF received the first of its 28 Hawk AJTs, also known as the TMk2, last year. Significant progress with the aircraft, which is used to train fast jet pilots of the future, has since been made.

Wing Commander Brian Braid said: "To complete more than 500 sorties and flying hours in the Hawk TMk2 is a great achievement. Since coming into service last April the aircraft has caused quite a stir at RAF Valley as a world leading fast jet trainer.

"It has all the familiarity of the much-loved Hawk series of aircraft, but has the added bonus of being packed with the latest technology and avionics.

"The Hawk TMk2 is set to revolutionise the way the RAF trains its future fast jet pilots under the UK Military Flying Training System.

New Hawk trainer soars past its first 500 sorties



Hawk TMk2

"All pilots currently flying the Hawk TMk2 have nothing but praise for its ability to emulate our front line aircraft and are looking forward to being able to teach students and front line fast jet

pilots in the new aircraft in the near future."

To date 23 of the 28 aircraft have been delivered to RAF Valley on Anglesey. The final aircraft is due to be delivered this year.



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The three machines will offer a combination of capabilities:

- The Solo mobile C-Arm system will provide real time X-ray image display for dynamic imaging of casualties. It will be used primarily in the operating theatre to help surgeons during interventional procedures (limb alignment, looking for shrapnel etc).
- The DRagon light mobile direct digital radiography system, pictured above, is extremely compact and versatile and can be moved into a variety of locations usually inaccessible to conventional X-ray units.
- The MobileDaRt Evolution motorised mobile direct digital radiography system will provide the backbone of the imaging workload in a more static environment such as a field hospital.

New kit will give medics the complete picture

MEDICAL TEAMS on the front line are set to receive a boost to their life-saving equipment with the introduction of new mobile digital X-ray machines.

The Solo mobile C-Arm, DRagon light mobile direct digital radiography system and the MobileDaRt Evolution motorised mobile direct digital radiography system, have been bought by DE&S under a £2 million contract with Gloucestershire based company Xograph Healthcare and will mean quicker diagnosis for troops injured in the line of duty.

Squadron Leader Martin Coleman, lead radiographer from the Centre for Defence Imaging said: "We are constantly looking at ways to improve the equipment supplied to our medical teams on the front line.

"The acquisition of this fleet of direct-digital x-ray equipment will further improve

Report: Hannah Swingler

the capability of the Defence Medical Services to deal with sick and injured on deployed operations.

"During major trauma, where rapid clinical intervention becomes the key component in saving life and limb, the ability to provide diagnostic images within seconds plays a vital role and this is what these machines deliver

"They will allow us to provide this rapid imaging wherever we require it, be that in a tent, in a custom-built hospital or in a surgical facility aboard a ship."

Each machine can produce an X-ray image of a casualty within three seconds of exposure and will replace the traditional method of 'wet film' processing where the picture has to be chemically developed, a

process which usually takes several minutes.

They will also have the ability to send images using wireless communications. This will avoid the use of trailing cables around patient trolleys and enable clinicians to view images anywhere in the medical facility.

Peter Staff of Xograph said: "This seven-year contract will help safeguard jobs at the plant in Tetbury and assist with the further development of specialised mobile x-ray solutions."



Above: solo mobile c-arm. Above right: MobileDaRt Evolution motorised mobile direct digital radiography system

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Battlefield power goes on display

DE&S STAFF will get a detailed look at the range of portable power sources for the infantry soldier at an Abbey Wood exhibition next month.

The SE Land Systems Power team will host an electrical power presentation on 15 September from 1.30-3.30pm.

From 9.30am there will be a portable power equipment display in Neighbourhood 2 to show a range of in-service batteries and fuel cells, Future Infantry Soldier Technology equipment from the Dismounted Soldier Systems team and the new 'future power' generator and distribution equipment from the Battlefield Utilities team.

The main aim of the display is to highlight to DES staff the ever increasing man-worn power burden, the sheer range of portable power sources in service use due to a lack of standardisation and how power generation equipment technology is changing to support those needs.

Bookings for the 1.30pm presentation – 90-strong capacity – should be through the ABW booking system.

Further information contact W01 Kev Hutson 030679 81686, W02 Graeme Edgar 030679 80716, Mr Dave Hadfield 030679 35358.

A million kilometres – Bulldog is up to the task

DE&S' BULLDOG team has celebrated a major milestone with the fleet passing one million kilometres since the vehicle's initial delivery in June 2006.

The system has maintained high levels of availability, largely to the efforts of a collocated joint DE&S and BAES project team responsible for managing the Contracting for Availability (CFA) contract.

A data capture exercise has given the team accurate usage and failure data on which to base the current incentivised support arrangement.

The final milestone on the conversion programme is to complete 900 vehicles by the end of next March.

All this has been achieved while delivering the parallel activity of up-armouring and supporting through the CFA contract the 117 vehicles deployed on Operation Telic in Iraq between November 2006 and May 2009.



Upgrade charts a faster way of supporting ops

MAPS, CHARTS and digital information will be provided more efficiently to the Armed Forces as a £15 million upgrade nears completion.

DE&S' Imagery and Geospatial Systems (IMaGE) Delivery Team led by Ian Smith has upgraded key capability at the Defence Geographic Centre (DGC) in Feltham.

The Product Generation Upgrade project replaced obsolete geospatial production systems by migrating functionality into the Picasso system delivered in 2007 and upgrading it in the process.

It was delivered early by Raytheon achieving its in-service date last October and was immediately used to create urgent specialist mapping products to support operations.

An enterprise licence agreement with ESRI (UK) has saved £2 million in whole life costs.

Development of more efficient processes by the DGC is near completion and full operational capability is expected this month.

The centre provides land maps, aeronautical charts, positional information, geo-referenced imagery and digital data for UK defence planning, operations and training.

Demand for conventional paper maps and charts remains constant but demand has grown for digital data to support weapons platforms, systems, navigation and command and control.

DGC data now forms a key component of most modern weapon systems.



Upgrade: information provided more efficiently to the front line

Capability gets more joined-up

REPRESENTATIVES FROM the MOD, industry and academia will meet quarterly to help embed System of Systems Approach (SoSA) behaviours across defence.

The SoSA Community Forum is led by the Systems Engineering & Integration Group at DE&S.

Niteworks, the MOD-industry partnership providing decision support to the MOD will facilitate meetings and provide secretarial support.

The aim of SoSA is to deliver enhanced capability through achieving commonality, re-use and interoperability of independently procured systems.

The SoSA Community Forum launches on 7 September at the Defence Capability Centre, Shrivenham. Attendees must register in advance to steve.hitchins@niteworks.net

NEWSREEL

Engineering partnerships

BAE Systems intends to establish four new university partnerships in maritime engineering, worth at least £5 million over the next five years, as part of its research and development investment in the maritime sector. The company has signed a Memorandum of Understanding with Heriot-Watt University, with a further three university partners to be named over the next 12 months.

Fuel supply review

SYSTEMS and engineering consultancy Frazer-Nash will work with KBR on a review of fuel supply to front line defence operations. KBR is providing new fuel handling equipment while Frazer-Nash's work will focus on justifying a safety case for any alternative systems and undertaking a human factors analysis to ensure any new process is straightforward to deliver.

Defence Review will still help shape the world

BRITAIN MUST help shape a changing world, rather than merely react to it.

Defence Secretary Dr Liam Fox has said the Strategic Defence and Security Review (SDSR) to be announced this autumn will set out how this will be pursued, including the capabilities the UK will need to protect our security.

"It enables us to reset and revitalise relationships with our traditional allies and forge new relationships with emerging nations.

"And it offers us an opportunity to make a clean break from the mindset of Cold War politics and dispense with the conceptual and physical legacies that persist."

Dr Fox used a speech at Chatham House to underline how vital the review will be to the MOD and the Armed Forces.

It offered a chance to bring together three policy pillars of defence, diplomacy and development in the National Security Council.

Defence policy would need to be better integrated with all levers of national power and influence.

"The SDSR will be watched closely by our adversaries and allies alike," he said.

"We must make sure that the signals we send are not perceived as a diminution of our commitment to engagement in world affairs, nor as curtailing our ability to respond to the threats we face.

"So where we can deter we will, where we cannot deter we will contain, where we cannot contain, we will deploy force and seek to defeat the threat.

"What we will not do is place at risk the British people, our interests, or our allies.

"Our opponents need to be convinced that we have the political will to oppose them, the support of our people and the means to follow through.

Dr Fox added: "We would put this country at risk if we did not make every effort to make deterrence credible, on all counts.

"That means updating our concepts, as well as our capabilities.

"A stable international order and security of the global commons is essential if our interests are to prosper.

"For freedom of action to defend our interests, we depend on the legitimacy we

have as a positive and active member of the international community.

"With power comes responsibility," he said. "The starting point for Britain to exercise that power and fulfil that responsibility is through a strong international system, a strong alliance structure, a strong economy and ultimately strong defence.

**Future
defence
policy –
page 14**

**Autumn's
SDSR
will be
watched
closely
by UK's
allies and
enemies,
says
Dr Fox**



Alliances are the key to security

DR FOX is pictured above right meeting Nato Secretary General Anders Fogh Rasmussen who was in London to discuss strategy and progress in Afghanistan.

Dr Fox said: "The strength of the coalition in Afghanistan is key to success there and Mr Rasmussen and I had an extremely productive meeting."



A Vanguard class submarine and, inset, a Lockheed Martin Trident missile breaks the surface on a test firing

Next Trident must be value for money

A REVIEW of the cost of renewing the Trident nuclear system will not form part of SDSR but will look at a number of elements associated with the deterrent to ensure they provide value for money.

Defence Secretary Dr Liam Fox said during a defence debate in the House of Commons last month that the Government has committed to maintaining Britain's nuclear deterrent.

But renewal of Trident should be scrutinised to ensure it provided value for money.

Dr Fox said the value for money review findings would be considered by the National Security Council.

The council's conclusions will 'inform' the Strategic Defence and Security Review and the cross-Whitehall

Comprehensive Spending Review published in the autumn.

At Commons question time Dr Fox said: "The programme will cover the timetable itself, submarine numbers, the number of missiles, missile tubes and warheads, infrastructure and other support costs, and the industrial supply chain."

On the commitment to maintain Trident and not consider it in SDSR, Dr Fox said: "We know that abroad there are a number of countries trying to develop nuclear weapons."

"We do not know what will happen between now and 2015, the timescale for the Trident replacement programme, and we cannot play fast and loose with Britain's defences."

More SDSR roadshows to come

DR FOX has emphasised the importance he attaches to the SDSR being conducted as transparently as possible to maximise the engagement of all staff, military and civilian. Inevitably there will be activity that will take place in a private space because of the sensitivity of the types of decision that will arise.

Within those limits DG Strategy and members of his team will continue to hold Townhall roadshows in Main Building and are setting up similar meetings outside London, in particular at Fleet, Land and Air Command, to update personnel on the developments of SDSR.

These are supplemented by DG Strategy's SDSR Newsletter published on the Defence Intranet and supplemented by further detail on the SDSR Defence Intranet page, and by updates through the chain of command as appropriate.

Challenge laid down to UK industry

DR FOX has challenged industry to 'bring more to the table' to help reshape UK defence.

He pledged to support the UK defence industry as a vital strategic asset and added that priorities for industry would be laid out in a new Defence Industrial Strategy, published after SDSR has been concluded.

"We will support the drive for exports with an active and innovative programme of defence diplomacy," he promised.

"We will develop innovative training and exercise support in conjunction with industry. We will ensure that our own requirements for new equipment are designed from their inception with exportability in mind.

"And we will reform our acquisition processes and provide our suppliers with increased clarity and predictability including a 10-year planning horizon agreed with the Treasury, audited by the National Audit Office every year."

Mr Fox told industry representatives at the Farnborough Air Show that industry's long-term prosperity rests on offering better value for money to the British taxpayer.

Three things needed to be understood, he added. "First, without cost containment in the current programmes we have no option but to cut the programmes currently underway or curtail investment in future programmes.

"Second, we must reduce fleet numbers that provide any one capability because we cannot afford the luxury of multiple supply chains and the associated training and infrastructure costs.

"Third, too often in the past we have simply replaced old platforms with an upgraded version of the same sort of equipment."

Dr Fox said he would make sure the MOD's acquisition reform programme is driven by the need to define and maintain a programme affordable in the long-term and sustainable year by year.

The new Defence Industrial Strategy will explain priorities and key policies on supporting exports and small and medium enterprises.

And it will set out sovereign requirements, and how associated industrial capabilities will be protected.

"I do recognise that the UK defence industry is a special strategic asset that underpins our strategic relationships," he said. "But industry must bring more to the table.

"If we all take difficult decisions now we can avoid having to take bad decisions later. If we do so, the rewards for our country will be worth it."

NEWSREEL



Third patrol boat launched

SAN FERNANDO, the last in a series of three offshore patrol vessels for Trinidad and Tobago, is launched by BAE Systems on the Clyde. The ships are part of a contract to build, integrate, test and commission three 90m vessels for the Trinidad coast guard. DE&S is providing technical advice and quality assurance as well as helping to organise operational sea training for the 60-strong crews.

Reds' costs

RUNNING costs for the Red Arrows – the RAF's aerobatic display team – were £9.35 million for the financial year 2009-2010, Armed Forces Minister Nick Harvey has revealed.

Over the same period, in respect of the Red Arrows, the RAF received items to the equivalent value of £85,000 in sponsorship, £425,000 in appearance fees and £14,000 in merchandising Royalties.

Wing repairs

AEROSPACE equipment specialist Microtecnica has agreed with Panavia, EADS Defence & Security and BAE Systems to maintain wing sweep actuators for the RAF's Tornado aircraft fleet.

Under the Panavia tri-national repair process, Microtecnica will provide wing sweep actuator repair and overhaul services to BAE Systems for the wings of the UK's Tornado fleet.

More power, less weight, lower cost

DE&S teams keep working to lighten the soldier's load

SOLDIERS ON operations will be carrying lighter batteries from this autumn as technology continues to make life easier on the front line.

Rapid development of lithium carbon monofluoride (LiCFx) technology means new batteries for the Bowman VHF radio system will be lighter and last longer compared to batteries currently in use.

"An eight-strong section of troops will soon be carrying two LiCFx primary batteries, each weighing around 800g, to power radios," said project manager Pete Flowers of DE&S' Integrated Soldier Systems Executive.

"At the moment they carry 12 of the secondary batteries, which each weigh 1.13kg, for a 48-hour mission. For the section, the new batteries will mean a reduction of nearly 12kg.

"On longer duration minimally-supported missions where weight is a deciding factor these new primary batteries give a lighter option.

"They also fit in with ISSE aspirations to give the frontline commander tools to tailor his equipment to the mission in hand."

A contract has been placed for 2,000 primary batteries which will be delivered in-theatre by next month. Investigations are also being conducted into further uses of LiCFx technology.

Work on the batteries began last summer. Gary Wade of DE&S' Programmes and Technology Group, said: "Under a mechanism known as



Above: how new batteries will lighten the load soldiers have to carry.

Right: perfect partners – Glyn Stanton (ABSL), Gary Wade (TD S20), WO Dave Reeves (CSDC) Peter Flowers (ISSE) and Ian Whiting (QinetiQ) show off the lighter batteries.



Science and Technology Rapid Assistance To Operations – Stratos – the work was initiated because of the potential benefit to current operations.

"Strong sponsorship and early engagement with DE&S and user representatives enabled a robust research business case to be approved from RfR2 'formally conflict prevention' funding and ultimately this proved crucial in exploiting QinetiQ's excellent innovation."

The Command Support Development Centre led the

way with user input on design and performance while ABSL Power Solutions packaged the technology into a standard Bowman battery case.

A second phase of funding helped to mass produce the batteries and make key components cheaper.

Mr Flowers added: "This is an example of how DE&S pulls research into the supplier base bridging the 'valley of death' between research, ideas and growth, and technology delivery."



Submarine battery deal clinched

A NEW contract for 20 main battery sets for the Royal Navy's submarines has been signed with EnerSys.

President of EnerSys John Craig visited Director Submarines at Abbey Wood recently following the signing of the £14.5 million contract to supply batteries to *Trafalgar*, *Vanguard* and *Astute* submarines until 2015.

Mr Craig met Rear Admiral Simon Lister and Captain Mike Wareham, deputy head of programmes, In Service Submarines).

Rear Admiral Lister signed the final page of the EnerSys visitors' book which dates back to 1900. Mr Craig presented the rear admiral with a picture of Holland 1, the first Royal Navy submarine fitted with a battery manufactured by Chloride, a forerunner of EnerSys.

EnerSys, through their predecessors, have been the suppliers of main batteries to Royal Navy submarines since Holland 1 and are closely involved in the development of a main battery solution for the future.

An ageing fleet?
HMS Trafalgar
enters Devonport for
the final time



Submarine support set for overhaul

Frigate skipper praises quality of new sonar fit

THE COMMANDING officer of a Royal Navy frigate has praised the quality of his equipment following a major upgrade.

HMS Sutherland has joined the Auriga task group on a Royal Navy overseas deployment to the eastern seaboard of North America. Around 2,000 personnel from UK, France, Canada and US are taking part.

The exercise is the first time that *HMS Sutherland's* anti-submarine warfare capability has been operationally tested since her multi-million refit, which included installation of Thales' Sonar 2087 system.

The ship also operates with a Merlin helicopter fitted with the Thales Flash dipping sonar.

The deployment is focussing on a series of exercises to enhance the Royal Navy's operational capability with its coalition partners.

Commander John Payne said: "*HMS Sutherland's* inclusion in the Auriga deployment as the anti-submarine warfare



commander is testament to the world-beating capability offered by my Sonar 2087, combined with the sustained endurance and sonar suite on our Merlin helicopters.

"My team have been quick to develop and use new tactics that significantly enhance our submarine-hunting skill set and allow domination of the sub-surface environment over

significantly extended ranges. This is *Sutherland's* first major test since her multi-million pound refit last year and thus far we have impressed all spectators."

Sonar 2087 is a towed-array system that enables Type 23 frigates to hunt submarines at considerable distances and locate them beyond the range at which they can launch an attack.

IMPROVEMENTS ARE in the pipeline for future support to submarines.

Changes are needed as a requirement to have a number of submarines at high readiness along with a continuous deterrent at sea is becoming more demanding with an ageing flotilla and increased operational tempo.

Although the *Astute* class will bring new highly capable submarines into operation, the average age of the fleet in the short to medium term is increasing.

DE&S' Submarines In-service team is embarking on Flotilla Output Management (FOM), to look at availability, develop improved processes and revise commercial arrangement to incentivise performance.

FOM will also look at reducing costs and maintaining capabilities needed to sustain the Submarine Support Programme.

Some of the concepts FOM will take forward have already been demonstrated. The Vigilant Long Overhaul Period (Refuel) contract has incentive arrangements to tackle programme delays as well as cost growth and is showing promising results.

Also the Devonport Warship Support Modernisation Initiative (WSMi) contract recently included an amendment to contract for availability, incentivising performance towards meeting Navy Command's customer requirement. Other areas to be examined include the *Astute* maintenance cycle and the supply chain.

FOM's timescale is being driven by the Devonport and Clyde WSMi Fleet Time Engineering and Non-Engineering contracts which expire in 2013.

Other support contracts are also due for review, giving a once in a lifetime opportunity to introduce new arrangements.

The FOM team is co-located with Babcock in Merlin House, Filton. Rolls-Royce and BAES Submarines are expected to join shortly.

Further information from John Davis (Business Lead ABW 32172) and Capt Geoff Wright (Technical Lead ABW81242).

Defence Secretary Liam Fox outlines future strategy with an update on current operations

A Chinook releases flares as it leaves Forward Operating Base Jackson in Sangin and heads for Camp Bastion

‘We have a clear political strategy, and a clear military plan to support it. Now we must deliver’

The Prime Minister has reminded us of the ongoing sacrifices made by our Armed Forces in Afghanistan. In the face of such losses, we should be in no doubt about the importance of the mission. It is vital to our national security we have a stable Afghanistan able to maintain its own security and prevent Al Qaeda from returning.

We are a committed member of the international coalition of 46 countries in Afghanistan. We have a clear political strategy, and a clear military counter-insurgency plan to support it. The focus now is on delivering.

We face many challenges. Progress has been slower in some areas than others, particularly on the political side.

We can expect success in counter-insurgency to be gradual, cumulative and hard-won. But there has, nevertheless, been considerable progress.

Through a UK lens, it would be easy to assume that all of Afghanistan is like Helmand. In fact, many parts of the country are largely secure, with low levels of violence. In Kabul, the Afghans have assumed responsibility for security, and have proved themselves capable of dealing with localised threats.

And we are making good progress on building up the Afghan security forces, so that this pattern can be repeated elsewhere. The Afghan Army has been growing steadily over the years – and by 20 per cent in recent months – to around 130,000 now.

We are playing our part, and the Government has recently approved the expenditure of up to £189 million on new surveillance, communications and logistics equipment for our bases as part of Britain’s ongoing commitment to support the effective partnering of the Afghan security forces.

In southern Afghanistan, the story of this year has been one of the Afghans themselves increasingly coming to the fore in the fight against the insurgency.

In Kandahar, Afghan security forces are leading operations to set the conditions for improved Afghan governance.

In Helmand, Afghan and ISAF forces have together succeeded in expanding the authority of the Afghan Government to 11 out of the 14 districts, by driving insurgent fighters out of the population centres of Babaji and Nad-e-Ali, while consolidating previous gains in Lashkar Gah, Now Zad, Nawa and Gereshk.

The situation in Marjah remains challenging, but counter-insurgencies are about progressively winning the confidence of the local people. The US Marines are well placed to succeed.

Elsewhere in central Helmand, where our presence is more established, we have seen considerable success. In Nad-e-Ali, British troops have been operating alongside the Afghans to secure the district centre and allow unfettered access to local roads. Improved security is allowing effective governance to

flourish and trade to grow. In May, for example, around 3,000 Nad Ali residents elected a more representative District Community Council.

ISAF now intends to reinforce this success. For that reason, I have accepted an ISAF request for a temporary deployment of elements of our Theatre Reserve Battalion, the 2nd Battalion the Duke of Lancaster's Regiment. The Theatre Reserve Battalion is a standing force based in Cyprus which I have instructed should only be used for time-limited deployments to fulfil specific tasks. This deployment will meet those criteria.

In a counter-insurgency campaign, the people are the prize. It is hugely important that we strike the right balance between the numbers of the civilian population and the size of the security forces available to protect them. The Prime Minister and I regularly argued in Opposition that British troops in

'Operations in Afghanistan, though geographically distant, are of vital importance to our national security'

Helmand were too thinly spread and we had insufficient force densities for effective counter-insurgency. That is why we welcome the arrival of more than 18,000 US Marines, whose presence is allowing us to deliver a better and more realistic distribution of tasks within the international coalition.

ISAF has already transferred security responsibility for Musa Qaleh and Kajaki to US forces, who are building on our achievements there.

ISAF intends to restructure its forces in Farah and Nimroz provinces so that it



Building bridges with the local population – The Queen's Royal Lancers in Afghanistan

can consolidate a US Marine brigade in northern Helmand, which will assume responsibility for security in Sangin later this year. This will simplify current command arrangements and enable UK troops to be redeployed to reinforce progress in the key districts of central

Helmand. The Theatre Reserve Battalion will then withdraw.

The result will be a coherent and equitable division of the main populated areas of Helmand between three brigade-sized forces, with the US in the north and south, and the UK-led Task Force Helmand, alongside our Danish and Estonian allies, in the central population belt.

We have been closely consulted by ISAF, and fully support this plan. In Sangin, UK forces have made huge progress in the face of great adversity. The district centre has been transformed. Helmand as a whole is a safer place as a result of our endeavours and sacrifices there.

The operations in Afghanistan, though geographically distant, are of vital importance to our national security. On the ground, we continue to make progress. There will be hard days ahead, but the further changes I have announced will mean more manpower and greater focus for the key terrain of central Helmand. We have the right strategy, and we are determined to succeed.



Left: Dr Liam Fox receives by a Ceremonial Guard formed from The King's Troop Royal Horse Artillery outside MOD Main Building

MOD keeps opening doors for business

Centre for Defence Enterprise helps harness the latest research ideas



Above: Dr Helen Almey addressing a recent CDE seminar at the Systems Engineering Innovation Centre, part of the University of Loughborough.

Below: a recent call for proposals from CDE was for new ideas for EOD and Search (Explosive Ordnance Disposal) to assist CIED – 74 proposals were received as a result of this call and are currently being assessed. The picture shows current equipment and capability being described to delegates.

Below right: a Frazer-Nash exercise bike – a successful call for ideas to help rehabilitation of injured troops generated some excellent proposals. The prototype of this bike is now at the Headley Court rehabilitation centre.



To remain operationally effective, one of the key challenges that face UK Armed Forces is the ability to access the latest technology when most innovative science and technology investment now takes place in non-defence markets.

The MOD's Centre for Defence Enterprise (CDE), launched in May 2008, is part of the Defence Science and Technology Laboratory's programme office. It answers this challenge. It is the first point of contact for anyone who wishes to submit a research idea which has a defence application. Since 2008, it has received around 1,400 proposals with more than 150 receiving research contracts, totalling nearly £10 million. This is testimony to its success and the importance of the CDE role to bring together the technological challenges of defence with the UK's innovative science and technology suppliers in a new and agile way of doing business.

CDE, with seven full-time staff at Harwell in Oxfordshire, places its emphasis on open innovation and attracting suppliers from non-traditional areas who are new to the defence market, in particular small and medium sized enterprises (SMEs), academia (university departments and spin-out companies) and individual innovators. These are the sorts of potential suppliers put off by the costs of entering a new market, particularly given the often bureaucratic image of traditional defence procurement.

"We are here to engage, stimulate and share our knowledge through introductions to military users and others engaged in similar work," said Dr Helen Almey, head of the CDE.

"We need to anticipate, prepare for and meet the forthcoming challenges by being highly innovative, agile and flexible in our approach to defence science and technology and we can only do this by actively seeking novel and exciting ideas and contributions from across industry, academia and other enterprises."

Much of CDE's work is web based. Proposals received by CDE are assessed by MOD experts with a quick decision to follow. Contracts awarded are typically £20,000-£200,000 for short sharp studies to assess future potential and to inform further funding decisions; approximately 60 per cent of contracts go to SMEs. Successful projects are then considered for further funding under the main defence science and technology research programme and the defence equipment programme.

DE&S' Programmes and Technology Group and relevant project teams are involved in assessments while DCE staff are always on the lookout for more assessors and extra input to stimulate more ideas.

Dr Almey said the structured web forms that people must use are designed to help them submit information that is relevant. "Very simply, we need to know what it does, how it could contribute to defence and how it might be taken through to market," she added.

"This helps us to make rapid decisions with low value proposals being assessed in as little as 15 days which is appreciated by companies who don't have to be

‘We need to anticipate, prepare for and meet the forthcoming challenges by being highly innovative, agile and flexible in our approach to defence science and technology and we can only do this by actively seeking novel and exciting ideas and contributions from across industry, academia and other enterprises’ – Dr Helen Almey



waiting for months to find out if they will receive funding. We also offer online tracking so that progress can be monitored throughout the process.”

The potential supplier base for calls is stimulated by regular presentations around the UK that provide a broad general insight into the MOD’s requirements, as well as more detailed information on hot topics. CDE also holds regular seminars to encourage submissions and are particularly recommended for new suppliers unfamiliar with defence.

Dr Almey and her team are determined to get the message across – that anyone with a good idea that will benefit defence can make an application for funding through CDE that will receive serious consideration.

The response from current and new defence industry participants, SMEs and innovators has demonstrated a previously unmet need for the supplier base to have a simple means of engagement with the MOD. It has also demonstrated the benefit and cost effectiveness to MOD from tapping into innovative suppliers with CDE becoming a key means to engage, educate and develop ideas with non traditional but highly innovative suppliers.

“We have now proved that the MOD is open for business,” said Dr Almey. “Anyone can attend our popular seminars and we are sharing our knowledge and requirements online so that we can meet the widest possible audience. It is now definitely a misconception that MOD is difficult to deal with – just contact me if you have a problem.”



A significant number of CDE initiated programmes have potential for both long and short term military capability requirements:

Intelligent Textiles (above): a small two-person company that weaves electronic circuits into fabric, thereby reducing the weight and bulk from power and data cables carried by infantry.

D30: a Brighton based SME with a shock absorbing material developed for extreme sports clothing that has now been further developed and tested initially under CDE funding for the potential to provide enhanced protection in helmets and integral knee/elbows protection in combat clothing. This is now under consideration by DE&S’ Defence Clothing team.

Frazer-Nash: Utilising their work supporting Paralympic athletics, Frazer-Nash received CDE funding in Autumn 2009 to develop prototypes to aid the medical rehabilitation of wounded service personnel. The prototypes, below left, were delivered in April 2010 and well received; they have been retained by the Defence Medical Rehabilitation Centre at Headley Court for immediate use.

ABSL: Responding to a March 2009 call, ABSL received support for two proposals for improved soldier power supplies. A short term proposal providing a direct replacement battery with more capacity has been tested by DE&S. A longer term proposal for a methanol fuel cell is now part of a joint programme with the US.

Bubblephone: Based at the Innovation Centre at the University of Sussex, Bubblephone received CDE funding to develop technology that maintains radio network connections irrespective of environmental changes. Bubblephone are now working with General Dynamics on further development and exploitation.

Cyber & Influence Science & Technology Centre: The Cyber and Influence Centre, as part of the National Cyber Security Strategy, has used CDE to establish information exchanges with a wide range of technology and social scientists to develop defence capability in this critical area, including funding projects and PhDs.

More information on the Centre for Defence Enterprise – www.science.mod.uk/enterprise
CDE can be contacted on science-enterprise@mod.uk or 01235 438445.



The Royal Navy's newest air defence missile has successfully completed its toughest test yet on trial in the Mediterranean. Sea Viper achieved a direct hit in a salvo (multiple missiles) firing against a manoeuvrable sea skimming target travelling at hundreds of miles an hour – the most challenging trial of the system to date.

Designed to arm the Navy's new fleet of Type 45 destroyers, the missile system (previously called PAAMS until it was renamed by the Royal Navy) will set new standards in air defence.

It is capable of defending the Type 45 and ships in its company against multiple attacks from the most sophisticated enemy aircraft or missiles approaching from any direction and at supersonic speeds. The system can even engage more than ten targets simultaneously – a huge leap in capability for the Royal Navy.

Richard Smart, Head of Complex Weapons team at DE&S, said: "The DE&S Weapons and Destroyers teams and MBDA alongside our international partners have worked closely together to achieve a very successful trials outcome. We have overcome a number of significant hurdles and everyone involved is rightly proud of reaching this milestone.

"While there is more work to do we are well on our way towards the first firing later this year

from a Type 45 platform, *Dauntless*, in support of demonstrating Sea Viper's world class capability on board the Type 45 destroyers."

A key element of Sea Viper's capability is the sophisticated phased array Sampson radar which has a range of 400 kilometres. Its onboard position about 30 metres above the water widens its horizon at sea level to enable the system to react to high-speed, very low-level, anti-ship missiles.

Sampson, which was designed to the Royal Navy's specific requirements in the UK by BAE Systems, sends a target location update to the missile during its flight which uses thrusters powerful enough to shift the missile sideways several metres to bring the warhead into range of even manoeuvring targets.

It is the latest in a string of recent milestones for the Type 45 project which saw the second ship in the Class, *HMS Dauntless*, commissioned into the Royal Navy in June and the fourth ship, *Diamond*, complete its latest set of sea trials. The landmark launch of the final ship of the class, *Duncan*, is due before the end of the year.

Meanwhile the first of class, *HMS Daring* has passed Basic Operational Sea Training (BOST) that saw the ship put through her paces over several weeks off the

Sea Viper is fired during its latest set of trials

Pictures: MBDA

T45s keep passing the milestones

IN A further demonstration of progress on Type 45, Transfer of Asset for *HMS Dauntless* has taken place.

The second of three key acceptance events within Type 45's progressive acceptance programme, Transfer of Asset is declared when six of the nine Type 45 Key User Requirements are agreed.

The final agreement that all Key User Requirements are met will be at In-Service Date (ISD).

The first milestone in this acceptance programme – Acceptance off Contract – was achieved on 3 December 2009, and the final milestone will be the declaration of ISD.

HMS Dauntless is currently undergoing Stage 2 sea trials which are progressing well.

Dari Vipe



ng and Sea r pass the test

The kit works – now it's down to the people

coast of Devon and Cornwall to test her crew. Training culminates in a realistic war at sea with other ships, submarines and aircraft where every possible scenario is simulated from attack from above and below water to fires and floods.

Commodore Steve Brunton, DE&S Head of Destroyers, said: "The successful

completion of BOST has proved that *HMS Daring* will provide the Royal Navy with a world class platform and a step change in capability.

"*Daring's* commanding officer and his company deserve immense credit for achieving so much during BOST, as do the Destroyers Team in DE&S, Navy Command and industry for their critical

contribution.

"We have all learned a huge amount about *Daring* and the Type 45 Class and my team in DE&S, in partnership with the ship's company, Navy Command and industry are determined to take forward all we have learned through BOST to deliver an even greater level of performance in future."

Report: Sally May

Pictures: LA (Phot)
James Crawford
and LA (Phot)
Martin Carney



Above and left: realistic warfare scenarios were put in front of *HMS Daring* and her crew as she took part in her Basic Operational Sea Training in the English Channel

Taranis unveiled – how the ‘god of thunder’ will shape future thinking



An unmanned combat aircraft of the future – Taranis – has been unveiled. Named after the Celtic god of thunder, the 12m long concept demonstrator with a wing span of 10m will test the possibility of developing the first ever autonomous stealthy Unmanned Combat Air Vehicle which would ultimately be capable of precisely striking targets at long range, even in another continent.

Should such systems enter service, they will at all times be under the control of highly trained military crews on the ground.

The futuristic Taranis was unveiled at BAE Systems in Warton, Lancashire. Minister for International Security Strategy Gerald Howarth said: “Taranis is a truly trailblazing project. The first of its kind in the UK, it reflects the best of our nation’s advanced design and technology skills and is a leading programme on the global stage.”

Taranis is an informal partnership of DE&S and industry talents including BAE Systems, Rolls-Royce, QinetiQ and GE Aviation.

Jonathan Barratt, leader of DE&S’ Unmanned Air Systems team, said: “The Taranis project was launched by my team in a fanfare of media coverage just over three and half years ago, and I was absolutely delighted to attend the unveiling which is a key project milestone.

“For me this has been the highlight of the programme so far. Taranis is a world-class technology demonstrator programme that seeks to provide the MOD with critical evidence on the potential for Unmanned Combat Air Systems.

“The programme will inform future capability decisions about the likelihood of a force mix of manned and unmanned aircraft.

“Taranis is a showcase for UK engineering and capability, highlighting the exceptional level of MOD and industry collaboration achieved in developing a world leading technology in the form of this next generation combat air system.

“It’s a phenomenal achievement by the MOD and joint industry team to have reached this point on such a technically complex and challenging project, and I look forward to the forthcoming flight trials in 2011.”

Nigel Whitehead, group managing director of BAE Systems’ Programmes and Support business, added: “Taranis has been three and a half years in the making and is the product of more than a million man-hours. It represents a significant step forward in this country’s fast-jet capability. This technology is key to sustaining a strong industrial base and to maintaining the UK’s leading position as a centre for engineering excellence and innovation.”

Taranis has been designed to be an unmanned, stealthy autonomous combat aircraft ultimately capable of delivering weapons to a battlefield in another continent. It will be able to hold an adversary at continuous risk of attack; to penetrate deep inside hostile territory, find a target, facilitate either kinetic or non kinetic influence upon it, assess the effect achieved, and provide intelligence back to commanders.

Originally valued at £124.5 million, the contract has been uplifted under separate approvals to £142.5 million and extended by about a year to accommodate an additional programme of work with a wider scope. This utilises the Taranis air vehicle to provide further outputs with wider exploitation into manned fast jet aircraft and includes additional risk mitigation.

The system will be comprehensively and extensively ‘flown’ on the ground, which will be a stepping stone to ensure that the system progresses into its flight testing phase in a safe and low-risk manner.

Flight trials will not take place in the UK, but will be conducted in safe designated test areas under close supervision.

‘Taranis is a showcase for UK engineering and capability, highlighting the exceptional level of MOD and industry collaboration in developing a world leading technology’ – Jonathan Barrett, DE&S



□ Taranis is jointly funded by the MOD and UK industry and is managed by DE&S’ Unmanned Air Systems team.

□ Taranis aims to push the boundaries by providing advancements in low observable capability and autonomous mission systems operations showing feasibility and utility of UAVs.

□ The project was developed from earlier work on the BAE Systems-funded Raven programme and many other technology de-risking activities under joint industry and MOD funding.

□ The Raven programme demonstrated in flight an autonomous system using a configuration similar to the one proposed for Taranis.

□ BAE Systems was appointed as the industry lead and prime contractor for this joint project with MOD to develop Taranis.

□ The project is managed via a teaming arrangement including BAE Systems, Rolls-Royce, the systems division of GE Aviation (formerly Smiths Aerospace) and QinetiQ to work alongside MOD staff and scientists under a project team charter.

□ BAE Systems as prime contractor will provide many elements of the Taranis technology demonstrator, including low observability, systems integration, control infrastructure and full autonomy elements (in partnership with QinetiQ).

□ Rolls-Royce will focus on the next generation propulsion installation while the systems division of GE Aviation will use their skills in ‘vehicle systems’.

□ In addition to the primary industry partners, the project also engages a significant number of other suppliers throughout the supply chain.

□ Initial ground-based testing began this year with first flight expected to take place next year.

‘We’re facing an intelligent and determined enemy, and we have to outwit them. This vehicle helps us go places where they aren’t expecting us to be’
– Sgt Adrian Foster, 42 Commando, Royal Marines

When purchase of the latest batch of Jackal vehicles was announced at DE&S’ DVD event in June it took the number of Jackal vehicles procured for UK Forces to more than 500.

The announcement, by Defence Equipment, Support and Technology Minister Peter Luff to add another 140 vehicles of the 2A version of the weapons-mounted patrol vehicle at a cost of £45 million was another vote of confidence in a vehicle which has enabled British patrols to keep in touch with the enemy, often in the toughest of Afghan terrain. Around 40 of the Jackal 2As are due to be delivered this month.

Jackal is the best known of the high mobility transporter vehicles delivered by Babcock over the last few years. The original contract to produce the vehicles was signed as an Urgent Operational Requirement in 2007. The contract has since delivered with huge success.

Jackal vehicles are produced by Babcock under an alliance with Supacat, the prime contractor and design authority. Supacat is responsible for design, development, prototyping, integration and programme management, while Babcock takes responsibility for detailed production planning, purchasing and manufacture at its Devonport factory.

Perfect partnership has been the key for the project co-ordinators at DE&S. “The success of the Jackal programme has been grounded on a combined effort between the project team and industry, who have shown great will to achieve and the ability to take risk to continue delivery,” said Alan Stephen, DE&S’ high mobility transport vehicle project manager.

“My team is thoroughly committed to achieving the best solution for the soldier on the ground, as early as possible, as economically as possible.

“We can’t rest on our laurels though, and are continually examining ways of making an excellent vehicle even better. Regular good communications direct with theatre and excellent backbriefs



From production line to the front line: Jackal in the making at Babcock, above, while, below, troops provide reassurance to the local population in Lashkar Gar



‘We are continually examining ways of making an excellent vehicle even better’ – Alan Stephen, DE&S

from returning brigades assist in identifying where we should be looking at improvements.

“Of course it does help motivation that it’s a very well liked vehicle which has delivered an important capability to Operation Herrick.”

The vehicles are built by a team of up to 130 Babcock employees working on the Devonport pulse production line, along with a smaller project management team of 25.

The pulse production line involves dividing the total manufacturing activity into a series of 12 equally balanced packages or ‘cells’, and the vehicle is physically moved, or ‘pulsed’ from one area assembly to the next on a daily basis.

Application of a ‘lean’ philosophy has identified and eliminated any non value-adding activities, and serves to ensure that the demanding delivery schedules and critical quality and reliability



500 up and counting – Jackal keeps on proving its worth

requirements are met. This is coupled with highly effective supply chain management to reduce lead times, ensure quality and reliability, manage obsolescence, and ultimately drive down the cost of construction and ownership. Production runs at a rate of one vehicle a day.
 Babcock Land Systems Director Chris

Dunn said: “The Jackal vehicle has been a resounding success, having proved its versatility, combining speed and manoeuvrability with unparalleled cross-country performance over Afghanistan’s harsh terrain.
 “We are delighted to be working in alliance with Supacat to deliver these vehicles reliably and consistently within

the shortest possible timescales.
 “Further, we have established Babcock as a company that can be relied upon to deliver vehicles of exceptional quality at record pace and, being OEM-independent, we are also talking to other vehicle designers about building their vehicles for upcoming programmes in the UK and abroad.”

Jackal – the story so far . . .

In service are three Army variants based on the high mobility transporter, the 4x4 Jackal in three variants (1, 2 and 2A), the 6x6 Coyote and the 6x6 MEP (Military Enhancement Programme) vehicle.

The MEP was procured as the base vehicle for the Soothsayer programme, which was cancelled in 2009; 35 vehicles were produced.

The first Jackal contract was placed on 28 July 2007, and the first vehicles entered service in November 2007; vehicles were in theatre in early 2008.

Follow-on buys occurred in 2008 to bring the total to more than 200.

On 9 April 2008, the contract was signed for more than 100 more Jackals; these were at the Jackal 2 build standard, and entered service in August 2009.

On 12 May 2010, a contract was signed for around 140 Jackal vehicles, at the Jackal 2A build standard.

Approximate contract value of the various buys is £174 million for Jackal 1 and £45 million for Jackal 2A.

More than 70 Coyote have been built; the Coyote is the light vehicle in the Tactical Support Vehicle family, and entered service in August 2009.

The Jackal 2 contract and the Coyote contract were awarded together, with the number of vehicles changing during the buy; the combined value of the two contracts together is £140 million.

Arizona dreamin'



An Apache during Exercise Crimson Eagle
 Top left: Alex Bond
 Below: vital post-firing cleaning, and a close up of the missile launchers
 Bottom: an Apache missile firing at night

US adventure with Apache team helps Alex move towards an MOD career

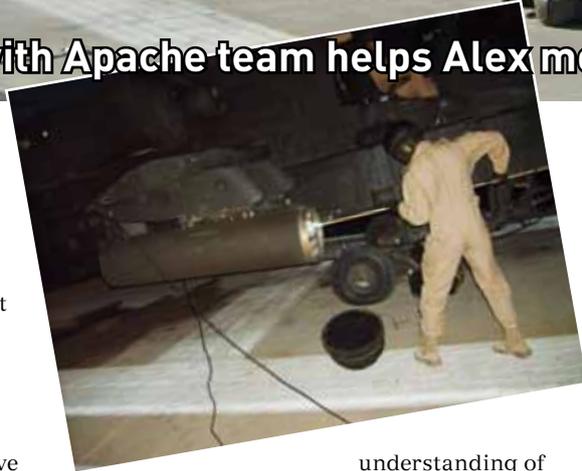
DE&S' APACHE team has supported Defence Engineering and Science Group weapons graduate Alex Bond on a four-month placement with the Weapons In-Service Support (ISS) section of the team.

Alex has been helping the ISS team with day-to-day weapon-related issues, ranging from rockets and missiles to ancillary explosive devices.

Part of Alex's remit was to act as a liaison officer on Exercise Crimson Eagle 10a, the pre-deployment training activity for Apache pilots, ground crew and maintainers, which takes place in Arizona and includes live firing training exercises.

Alex was tasked to investigate the complex issues of CRV7 rocket launcher 'burn through', a phenomenon widely known to the Apache community where rockets burn holes through their respective launcher tubes on firing.

Alex was required to delve deep into the issue to assist in the broader



understanding of the problem, and to feed back information to industry to solve the problem.

Alex took part in rocket loading and unloading, working closely with Army Air Corps ground crew and Royal Electrical and Mechanical Engineers' technicians, and observed day and night firing.

"The visit was an opportunity of a lifetime," he said. "I gained so much invaluable experience, especially in the close relationship between the project team and the military. I never really appreciated just how much military exposure this placement would provide.

"The hot, dusty ranges of Arizona have provided me with a superb insight to the harsh reality that these crews and equipment are required to operate in Afghanistan. I have a far deeper level of respect for what military personnel do and understanding of the environment under which they operate.

"I leave Apache having learned

so much about weapons and the sheer number of people across the whole MOD and industry required to bring together a successful and efficient helicopter programme."

Alex leaves the Apache team for another DESG placement with the Defence Science and Technology Laboratory, who lead the science and technology sector's response to the MOD's current and future needs.

Alex will be integrated into the Improvised Explosive Device (IED) section, hoping to visit Afghanistan in the near future to support operations.

The Defence Engineering and Science Group's graduate training scheme is an essential part of the MOD's recruitment programme, launching hundreds of graduates into MOD Civil Service careers in engineering or science. The scheme has been an industry leader for almost 30 years, and is accredited by a number of professional institutions including IMechE, IET, RINA, IoP, ICE, IMarEST and RAeS.



Delivery guide now available

THE CAPABILITY Delivery Practitioners' Guide is now available at DE&S.

The guide is the result of DE&S people joining forces with others in defence acquisition to define how the programme approach will operate.

Programme boards were set up last year to manage delivery of capability by looking across all Defence Lines of Development and through life – not just focusing on getting equipment into service.

The Guide is based on external leading practice from the Office of Government Commerce's programme management methodology.

But, it also brings together good practice and experience from those directly involved in programme board business – in DE&S that includes the programme support functions in each of the operating centres as well as people in finance and commercial functions.

Next month's *desider* will include more information, including what it means for people in DE&S. Searching the Defence Intranet (search term: TLMC Phase) or contact Cindy Levy in the Capability Delivery Implementation (DES-Cap Del Impl-PL0) Tel 030 679 33460.

Logs support takes on a slimline look

A NEW slimline standard for Integrated Logistic Support is to be applied to all defence equipment projects.

It updates an American-based standard in use in the MOD since the 1990s which helped reduce support costs by imposing disciplines on new equipment projects, using analysis to influence design and optimise support.

The original standard, widely used by the MOD and industry, aimed to procure equipment and support which met stringent front line requirements in a cost effective and timely way.

But, as business has evolved with new initiatives like contracting for availability and shared responsibility with industry for acquisition and support, the standard has increasingly been too inflexible to encourage innovation.

Def Stan 00-600, developed by DE&S and industry, is a concise, user friendly document fully aligned to today's business environment

It includes updates on requirements for information management and focuses on outputs and deliverables rather than process.

Dan Smith (pictured, left), the Joint Support Chain's through life support deputy head of policy, leads development of the new standard.

"The new standard reflects our desire to reduce prescription, giving industry the flexibility to use their expertise to deliver innovative and cost effective solutions," he said.

"00-600 is a smart business standard for today's defence environment and should result in first class support for our new defence equipment over its operational lifetime."



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DE&S closes in on recycling targets

DE&S IS moving closer to meeting its 40 per cent recycling target by the end of the 2010/11 reporting year.

DE&S' annual recycling rate rose from 29 per cent for 2008/9 to 38 per cent in 2009/10.

Success is down to a number of factors including local initiatives to improve segregation of materials, better performance monitoring and developing more efficient waste management programmes.

Sheree Apps, environmental protection policy adviser at DE&S said: "It is very encouraging to see the recycling rate continue to rise.

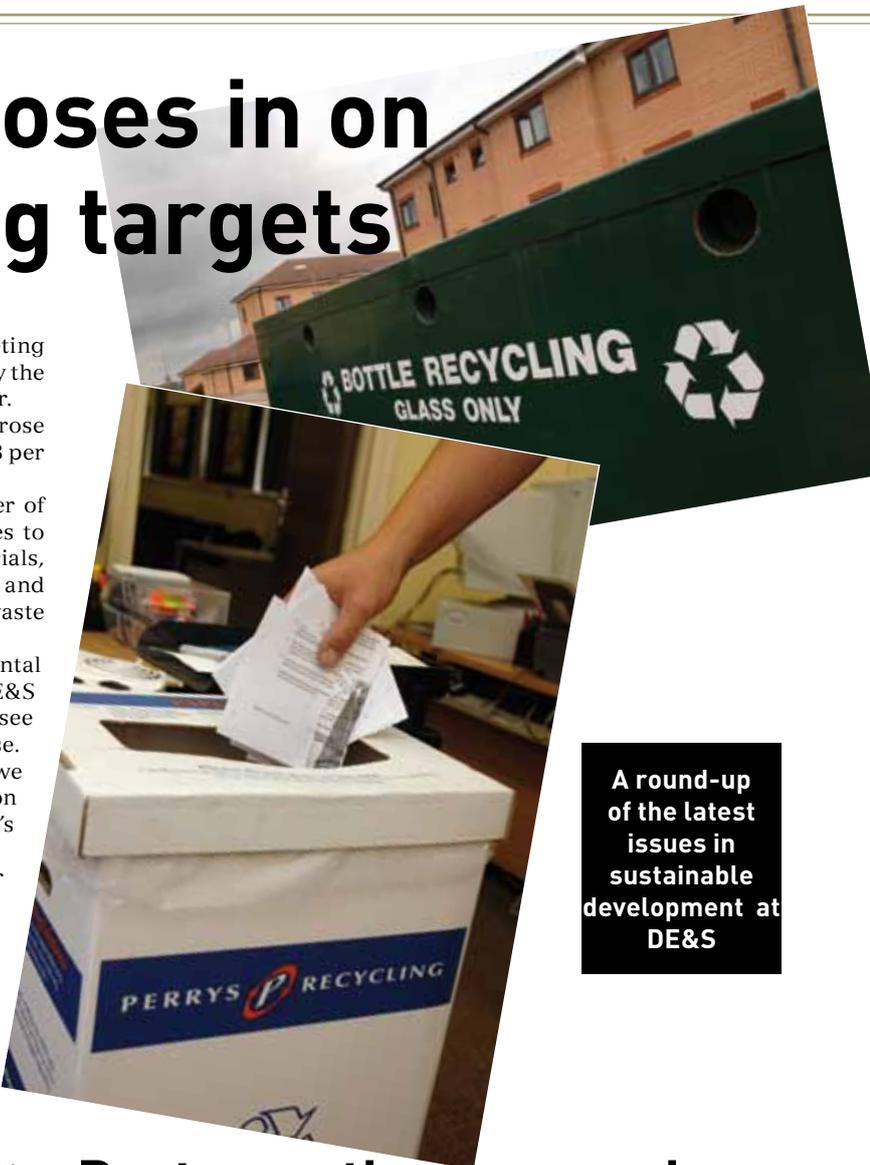
"These figures show that we are making a positive contribution towards the Government's sustainable operations targets.

"However, even greater challenges lie ahead in terms of further increasing recycling to meet the MOD's long term objective to become a zero waste to landfill organisation."

DE&S' ENVIRONMENTAL Protection Team has produced a leaflet on waste management to raise awareness on current issues.

It also includes suggestions for employees on how to become more environmentally active in the workplace.

The leaflet is due to be published on the Defence Intranet but copies are available from the Environmental Protection Team on 9355 68560 & 01225 468560 or email: DES SE SEP-EP-Advice1.



A round-up of the latest issues in sustainable development at DE&S

'Skip it' at Devonport

A SUCCESSFUL waste management initiative at Devonport naval base has helped to achieve a key target to reduce landfill.

Following a sustainability assessment on the base, new waste management practices are in place including additional skips for segregating different types of materials.

It is now possible to identify and separate food waste coming from ships which needs to be disposed of separately from shore side waste in line with legal requirements.

This initiative has been supported by an extensive communications campaign called 'Skip it' to ensure that waste is deposited in the correct skip.

So far recycling and waste minimisation efforts have resulted in a small reduction of waste down to 11,989 tonnes this year compared to last year's 12,682 tonnes, and more than 150 tonnes of paper, card cans and plastic have been recycled.

Portsmouth saves cash

WASTE REDUCTION techniques have been incorporated into a construction project at Portsmouth naval base.

The apprentice training building which houses a mixture of offices and workshops has undergone a major refurbishment.

Working with Debut Services (South West) and the principle contractor for the project, Morgan Ashurst, a segregated waste management plan was agreed before construction enabling the planning team to make decisions to reduce waste throughout the project.

Other actions included reusing stones on the roof and blocks and the bricks from the site.

A designated area was set up for waste segregation with different skips for key waste streams. This helped to divert 68 per cent of waste from landfill (1,913 square metres). Around £12,000 was saved by waste segregation and a further £2,860 for reusing blocks and bricks.

ALL THE MOD's key suppliers have signed the Sustainable Procurement Charter, which includes a commitment to work with the MOD to reduce greenhouse gas emissions.

The Climate Change Act 2008 commits the UK to reducing its emissions by 34 per cent by 2020 and 80 per cent by 2050, and the defence sector has a significant contribution to make towards this.

The MOD has joined the Carbon Disclosure Project (CDP). This not-for-profit organisation works with public and private sector organisations to help understand and reduce greenhouse gas emissions.

Through CDP, the MOD has asked key suppliers to disclose their emissions data

Companies backing the cause

in 2010 to better understand suppliers' emissions and to look at ways to reduce them.

Ships' Operating Centre Board is emphasising that sustainable development is good business, and highlights achievements already made.

These include a 1-star leadership pack to brief the Board and promote good leadership. A new handbook presents best practice within the centre, including:

- waste management, where *HMS Ocean* is trialling the world's first ship-borne pyrolysis plant,
- Integrated all-electric ships such as the *Queen Elizabeth* carriers and Type 45 destroyers eliminating heavy gearboxes, complex propellers and separate generators – improving efficiency and reducing emissions
- Innovative hull fouling management and fitting transom flaps to reduce drag and fuel usage.

OCCUPATIONAL HYGIENIST
Kate Ansell – not someone who works with teeth, as she is often asked – provides a vital role in DE&S.

Occupational hygiene is a specialist branch of safety, important for workforce protection.

They identify, evaluate and advise on chemical, physical, ergonomic, and biological issues to control workplace hazards from ships, aircraft, vehicles and submarines.

Within DE&S, they are embedded in the naval bases, as traditionally their work has been closely connected with shipbuilding and construction. Their services are provided to all DE&S and Fleet (RN and RNAS) establishments.

Kate said: “In the naval base environment we are faced with almost the complete spectrum of occupational hygiene issues.

“There are a myriad of problems related to identification of specific hazards, assessment of the risks posed, and advising on how to remove or control that risk.

“We look at the work environment to ensure people can work safely with either hazardous materials or in hazardous environments, and provide assurance to DE&S through the base commanders that the risks are being controlled in accordance with legislation.”

Kate cuts her teeth on occupational hygiene

A focus on an unheralded role in DE&S which is guaranteeing safety in the naval bases

Hygienists sometimes have to measure how much of a hazardous substance is in the air, or the level of a physical hazard, such as noise, that is present.

“One could almost describe us as ‘jack-of-all-trades and masters-of-all, because of the sheer range of workplace exposures that we deal with day to day,” said Kate.

“One day we could be dealing with noise exposures on rigid inflatable boats, another day we could be monitoring exposures to solvents during aircraft repair

work.”

DE&S provides a unique training ground for the profession and many highly regarded hygienists have spent time in the dockyards learning their trade.

Although a lot of the hard shipbuilding and repair work has been transferred to contractors, there is still plenty to occupy them, including stores depots and diesel exhaust emissions from fork lift trucks; noise from operating craft; air stations repairing high tech composite structures and hazards from

the use of amphibious support vessels.

It is a life of continuous problem-solving and trying to find the most practical cost effective solution, and it is a case of not knowing what is going to crop up next.

Kate added: “Did I ever envisage myself doing something like this? – No. Would I want to do anything else? – Sometimes. But then the next interesting challenge comes along and off we go again.”

Find out more at www.bohs.org.

Kate Ansell checks welldock ventilation on HMS Albion

Workshops make safety a JSC top priority

THE JOINT Support Chain is working hard to improve the safety and environment maturity within its 2-star area.

The JSC is committed to strengthening safety and environmental protection (S&EP) management systems, under the direction of Air Commodore Sue Armitage-Maddox.

The first Attitudes and Behaviours Campaign – ABC – workshop took place in February.

Further assessments were agreed at site level to include staff from all grades, industrial and non-industrial, to give a more comprehensive indication of the S&EP culture.

Workshops have now taken place for DSDA and BFPO, which generated involvement and suggestions from members of the workforce. More workshops are planned.

Workshops and ABC initiatives are

backed by the JSC management board and the JSC’s safety champion Air Commodore Armitage-Maddox.

“Effective safety management is vital and JSC will continue to focus resources on this important area,” she said.

“Initiatives that help raise our game will have 100 per cent JSC support.

“We need to continue to understand how our people and management view and interpret commitment to S&EP.”

Staff at all levels are involved in the ABC workshops and aware of S&EP issues. “After all, who is better to understand the hazards and problems, than the people doing the job?,” said the air commodore.

“Sharing good practice and ideas can only help the individual and the department to achieve objectives.

“We want to be ‘class leaders’ in the management of S&EP across the MOD as a whole.”

New strategy is published

THE MOD Safety Strategy has been published aiming ‘to prevent fatalities, and to minimise injury and ill-health to our people and those affected by our activities’.

The Defence Environment and Safety Board (DESB) has agreed a number of goals which, along with the instructions/processes contained in safety related JSPs, will help managers in achieving the strategic objectives.

Work on improving safety culture is progressing through the Safety and Environmental Protection Attitudes and Behaviours campaign (S&EP ABC).

Further information on the S&EP ABC can be found on the website or Shaun Ellis at DES SE SEP-HS-Man.

This year's GEMS awardees line up

Picture: PO (Phot) Amanda Reynolds



Towering list of money-saving ideas

DE&S awards

Idea of the year –

Apache forward servicing package Cdr David Bartlett, Major Mike Jeavons and WO1 Austin Harding suggested a 300-hour forward service package in place of the 300-hour depth service interval and a revised 600-hour depth service interval, identifying aspects of the 300-hour service which were critical and which could be moved to 600-hours without affecting airworthiness. 300-hour services could then be conducted in theatre in up to 10 days instead of 60-70 days needed to carry out the work in the UK. More than £10 million has so far been saved, flying hours increased and 12 fewer Apaches being taken back to the UK each year.

Most environmentally friendly idea – disposal of contaminated waste DSDA West Moors is the only area used by the military for safe storage of contaminated waste, primarily fuel. Accumulation of waste was impacting on management of in-service equipment. Keith Allen arranged a suitable contractor to recycle the waste, reducing transport and environmental impact. Savings have been confirmed over the first three years of implementation as £96,000.

Evaluator of the year

As a member of the Light Weapons team SSgt Callum Lockhart brings weapons into service. Many personnel come up with suggestions to improve weapons systems and support. SSgt Lockhart ensured evaluations were completed on sound technical and engineering evidence.

IDEAS FROM revolutionising Apache front-line servicing to disposal of fuel-contaminated waste led the way in this year's MOD GEMS awards.

Development of Apache helicopters' 600-hours depth servicing and 300 hours forward servicing package has increased the aircraft's available flying hours in theatre.

It has saved time, more than £10 million pounds and reduced pressure on the air bridge to transporting helicopters from the front line in Afghanistan to the UK.

The new package earned a trio from DE&S' former Attack Helicopters team from Yeovil – Commander David Bartlett, Major Mike Jeavons and Warrant Officer Austin Harding – the award of the suggestion which has had the most operational benefit.

It also won a new award of idea of the year and it is likely to win further accolades in non-government contests in the next few months.

The trio's work has already been implemented, helping the 14th year of the MOD's good idea scheme generate estimated savings of

DE&S out in front at the MOD's annual GEMS awards

£18 million in financial year 2009-10.

"That's £18 million which can be put to other high priorities," said the Chief of the Defence Staff, Air Chief Marshal Sir Jock Stirrup before the prize-giving at the Tower of London. "That in itself is sufficient justification for the scheme."

Sir Jock added that GEMS was all about adaptability and agility which was important in procuring and supporting military equipment. "We must have the mental agility to think outside the box and then have the determination to drive through that change," he said.

"The GEMS scheme exploits this and it is an example to everyone in defence."

Sir Jock also called on line managers to create a culture

which encouraged people to think laterally and to embed a culture of adaptability and agility into everything they did.

Keith Allen of the Defence Storage and Distribution Agency at West Moors saw his plans for safe storage and disposal of contaminated waste take an award for the most environmentally friendly scheme. Savings so far are estimated at nearly £100,000 for its first three years.

There was also an evaluator of the year award for Staff Sergeant Callum Lockhart of DE&S' Light Weapons, Photographic and Batteries team. The team receives a high number of suggestions for evaluation where SSgt Lockhart's role was to examine them objectively and fairly and make sure they are completed to high professional standards.

Recent benchmarking confirms GEMS as the most generous and far-reaching innovation and ideas scheme in the UK, and the third most successful of its type in the world.



Left: Richard Briscoe from Abbey Wood Mavericks wins the mixed hockey final with this penalty stroke against Boscombe Down A as around 2,000 competitors took part in the MOD's annual sports day at the University of Bath in sports ranging from six-a-side football to swimming.

Below left: Abbey Wood Trojans, in purple, get to grips with the early rounds of the men's football.

Below right: Andy Perryman of Enleigh-based DE&S Graphics puts bat to ball as they begin their defence of the rounders tournament, a defence which ended with semi-final defeat. Pictures: Andrew Linnett

Thousands put sport top of the agenda



Memorial service fund handed a flying start

MEMBERS OF the Military Flying Training System (MFTS) team have raised funds towards a memorial service dedicated to fallen Polish aircrew who served with a Bristol-based squadron in World War Two.

A cheque for £150 from a team social evening was presented to organisers at the MFTS headquarters in Filton.

Nine Polish airmen died fighting with 501 Squadron during the Battle of Britain before it moved to Filton, and a service to commemorate their achievements will be held at the Polish Roman Catholic Church in Clifton this year.

Gp Capt Stephen Richards said: "The part that these men

played during the Battle of Britain is highly commendable and it is an honour to make this contribution towards the memorial service.

"We are also helping to educate a new generation of the Polish community who may wish to join the RAF in the future."

George Peszynski of the Polish Church added: "Every penny donated to this service will ensure that the memory of those who fought for our freedom will be honoured."

A cheque for £50 was also donated to Flight Lieutenant Philip Lowndes of the Air Training Corps' 2442 Squadron based in Westbury on Trym.



Filton handover, from left: Gp Capt Stephen Richards, Flt Lt Philip Lowndes, George Peszynski, Air Commodore Andrew Sudlow and 501 Squadron Association chairman Bill Hickman



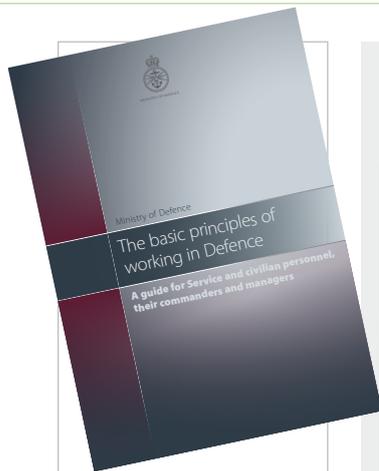
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Latest guide to how MOD works

A NEW guide setting out the basic principles that everyone who works in defence must follow in their day-to-day work has been launched by the MOD's 2nd Permanent Under Secretary, Ursula Brennan.

The guide is for service or civilian staff of all ranks and grades. It is an essential guide to the main rules to follow and where to find further information.

Its origin lies in a review of assurance conducted early in 2009 and is intended to help meet obligations, improve business and reduce bureaucracy.

Ursula Brennan said: "I encourage you to make use of this new and really simple to use resource, and to promulgate it as widely as possible."

"It is not a statement of the particular principles and rules that apply to specialist operational or business activities, but provides a quick introduction and reminder of the key principles."

"Although the guide should be particularly helpful for new entrants as part of their induction, it should also provide a handy 'checklist' or 'reminder' for the rest of us, and I strongly commend it to you."

The guide can be found under the 'How Defence Works' tab on the Defence Intranet. It will be regularly updated.

New tree continues tradition



AN ENGLISH Oak sapling has been planted in Devonport, replacing a 15-metre high tree which had been a familiar sight to service and civilian personnel on the Quarterdeck at *HMS Drake*.

The new tree continues a lengthy tradition of the Quarterdeck tree and the association of English Oak with the early construction of Royal Navy ships.

The previous tree was found to be decaying inside. Industrial partner Interserve removed it, section by section.

Commodore Ian Jess, commander of the naval base, planted the new tree in a ceremony at *HMS Drake*, left.

Barbershop singers are a cut above the rest

TWO MEMBERS of DE&S' ISTAR area have struck gold at the National Barbershop Singing Championships.

Colonel Richard Aspray (ISTAR operations liaison manager) and Squadron Leader Derek Boxell (ACCS requirements manager) are members of the Great Western Chorus, Bristol's Barbershop group.

The national finals took place in Harrogate with the Chorus taking first place in a field of 37.

They are now the only chorus to have won the competition eight times and will go on to represent the UK at the international finals in Kansas City, USA, next year.

Richard has been a member of the Chorus for several years, while Derek joined only nine months ago, having completed a Chorus-run 'learn to sing' course.

He is now looking forward to learning the repertoire and singing in some of the monthly concerts that the Great Western Chorus performs around the Bristol area.

The Great Western Chorus has more than 60 members, aged from 17 to 84. Further details at www.singbristol.com



Trophy winners: Derek Boxell, left, and Richard Aspray



The cash is handed over to the Solent therapy centre

‘Great eight’ efforts earn charity cash

A TEAM of eight from the Type 45 Destroyer team in Portsmouth have completed a day-long endurance event for the Solent multiple sclerosis therapy centre.

Commander Steve Lynn, Lieutenant Commander Dave Mackie, Warrant Officer Barry Stafford, Ian Hindmarsh, Vicky Barr, Steve Hiscox, Mark Burley and Dave Moss paddled two-person kayaks the 10.5 miles distance from the south end of Lake Windermere to Ambleside before walking 7.5 miles to Langdale to begin their 13-mile ascent and descent of Scafell Pike’s 3,209ft peak.

The day-long event – the L3 Challenge – took place in temperatures well into the 20s and raised £2,500.

A SPELL in Kabul has earned a DE&S finance officer her Afghanistan operational service medal.

Rachel Spicer, who is based at Yeovilton, was presented with her award by Lt Gen Gary Coward, DE&S’ Chief of Materiel (Land).

She joined the MOD Support to Operations programme last year and was based in the British Embassy in the Afghan capital during her deployment.

While there she was employed as the budget manager for a cross-government project supporting the building of Afghan capability for their Ministry of Interior.

This provided Rachel with a varied, interesting and challenging role, presenting her with the opportunity to develop her knowledge and skills allowing her to work with other UK Government departments and also other governments.

“It is a great pleasure to receive my campaign medal in recognition of my operational tour,” said Rachel.

“It was a varied, interesting and challenging role working with other UK government departments and other governments which allowed me to develop my knowledge of the MOD, other departments and core and functional skills.”

Returning to her position as a C2 finance officer with Helicopter Engines’ Future Support team, Rachel can now bring to her work both experience and a perspective on the operational pressures and requirements that are frequently only fully understood by the military staff with whom she works.

Rachel joined the MOD in 2003 as a project support officer, providing administrative support to IT-based projects in the helicopter environment.

She has since moved up through budget and accountancy management with the Chinook team to financial assurance roles with Helicopter Engines.



Lt Gen Gary Coward with Rachel Spicer

Kabul job sees Rachel play a starring role



Fundraising reaps rewards

NOMINATED CHARITIES at DSDA Beith – Beith Cancer Support and MacMillan Cancer Support – have been presented with a cheque for £750 by head of establishment Stephen Neil.

Beith Cancer Support was founded 21-years ago by local business owners Billy and Moira Haining to provide transport for cancer patients to and from hospital. MacMillan Cancer Support helps cancer patients get the best information, treatment and care available.



Off to 'big' school: youngsters say goodbye to their nursery days

Youngsters celebrate 'graduation'

FOURTEEN 'Busy Bees' at the Clyde Nursery – just outside Clyde's South Gate – have celebrated their graduation as they head off to primary schools.

Dressed in gowns and mortar boards, the youngsters were joined by carers, relatives and friends to mark their big day on Friday 11 June, with the Captain of *HMS Neptune*, Captain Michael Tarr, also attending.

The class of 2010 entertained their parents – many of whom work at the nearby base – with a selection of songs, bidding the Carousel-run nursery a fond farewell as they get ready to move to primary school this month.

Anne Jenkins, co-director of

Carousel Nurseries, said: "This is a special day. Some of the children have been with us at the Clyde Nursery since they were babies.

"For a few this will be the last time they see their classmates as they will be moving to different primary schools."

She acknowledged the firm links between the nursery and the parents who work at the base.

"It is lovely to have such a long association with the families here," she said.

"There are many who have enrolled two or more of their children with the Clyde Nursery over the nine years it has been running."



Swim boosts trekking fund

STAFF AT Devonport took part in a sponsored swim in the *HMS Drake* pool to raise money for disabled people planning to trek up Mount Kilimanjaro.

The swim supports the charity Limb Power which is giving amputees the opportunity to climb the African mountain.

Colin Davies (above), who has previously featured in *desider*, organised the swim to help take eight adventurous people on the climb who have had limbs amputated.

The Kilimanjaro expedition will take place on 14–24 October.

Bishop Peter drops in on Foxhill

A THREE-DAY programme of visits to organisations in Bath saw the Bishop of Bath and Wells visit Foxhill.

The Rt Rev Peter Price was met by site controller Alison McKeown and site assurance manager Bob Lewis.

The bishop was introduced to Colonel Andy Brown Head of the Medical and General Stores team when he spoke to the operations and projects teams on their work sourcing and procuring kit for front line operations.

Rev Price then met Morgyn Davies, Chief Salvage and Mooring Officer. The bishop explained his background and close involvement with the military which, in common with Morgyn, stretched back to childhood when his father served in the Royal Electrical and Mechanical Engineers.

The bishop took a special interest in pastoral issues of defence capability and how



Above, from left: Rob Hart, Alice Ramjuttan, Caroline Rummung and Zoe Cable of the PPPA at Foxhill with Rev Price

they were being measured and managed. He was concerned to understand how Salvage and Marine Operations staff dealt with seeing fatalities in accident recoveries.

Caroline Rummung, head of the People, Pay and Pension Agency's customer service

team, introduced Rev Price to staff who manage and support civilians deployed on operations in Afghanistan.

Rev Price said the snapshot of work he had seen carried out at Foxhill would enable him to contribute to House of Lords defence debates.

HR Information Notes are for

YOU

They contain vital information for all staff in DE&S - they are the main vehicle for announcing implementation of HR changes to line managers and individuals.

24/2010 – The Role of the Military HR Team

25/2010 – DE&S Manpower Agility and Recruitment Control Regime

26/2010 – Guidance on mobility and Travel to Work Area Issues for Bath-based staff collocating to Abbey Wood

27/2010 – DE&S Corporate Shadowing Scheme

Future of engineering is still safe on the Clyde



BUDDING ENGINEERS from schools around Scotland descended on Clyde's Off-Site Centre in Rhu for the Young Engineers' Royal Navy challenge.

Organised by Captain Naval Recruiting, the 16 June event gave 88 pupils from 13 schools the chance to learn about engineering and discover opportunities open to them in the Royal Navy.

Pupils were challenged to find a way to reconnect power to an earthquake-hit hospital, while the second scenario saw teams come up with a solution

to clearing rubble from a vital supply road.

Lieutenant James Tuhey, engineering outreach specialist, said: "The idea was to give the pupils a flavour of naval engineering and some of the work and challenges they could face if they decide on a career."

Commander Martin Claxton, Platform Group Manager, presented the winners with their goody bags, containing a torch, mini-toolkit, Royal Navy items, vouchers, as well as a £100 prize for the overall winners.

Future engineers get down to problem-solving during a visit to Clyde naval base

Remploy backs sustainable procurement

REMPLOY - THE UK's leading providers of specialist employment services and a major employer of people with disabilities and complex barriers to work - is the latest to sign up to the MOD's Sustainable Procurement Charter.

Remploy is looking to develop business across the MOD, either directly or within the supply chain, to ensure the future of its factories.

Alan Hill of Remploy said: "Becoming a signatory shows Remploy's commitment to work in a sustainable way both as a prime contractor to the MOD and as a sub-contractor when the opportunities arise."

Remploy, established in April 1945, has 54 factories employing 3,000. Another 10,000 people with disabilities were supported into mainstream employment last year.



EIGHT YINI - year in industry - students, above, experienced a visit to Type 45 destroyer *HMS Dauntless*.

YINI offers one year, pre-university or gap placements giving students experience in the engineering sector of DE&S. It also gives DE&S the opportunity to attract engineering graduates during the latter stages of their education programmes.

YINI supports DE&S' aim to encourage young people towards science, technology, engineering, and mathematics careers. It also helps promote the DESG graduate recruitment scheme.

The event was organised by the Engineering Skills Support team.

Students: Alexander Gisby, Jamie Lewis, Peter Stonham, Robert Hudd, Anna Perkins, Patrick Sharkey, Nicholas Goater, Karl Bates

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DE&S backs Armed Forces Day

COMMANDER MARTIN Claxton from Clyde naval base took to the waters of Loch Lomond in his single scull as a joint venture between Loch Lomond Rowing Club and the RN & RM Rowing Association to show support for Armed Forces Day.

Martin said: "We all wanted to show our support for Armed Forces Day – and rowing can be a very graceful sport. With the weather so good, I was able to fly the flag."



DE&S' Nimrod team marked Armed Forces Day by hosting a 1940s-style tea party at lunch on 25 June which raised £375 for the RAF Benevolent Fund. Their meeting room was decorated with wartime memorabilia and friends and colleagues were treated to tea and home made cakes in return for a donation to the charity. Staff also wore red, white and blue or 1940s outfits.



Raising the flag

DSDA BEITH staff turned out to see Steven McPhail proudly raise their Armed Forces Day flag.

Steven is an MOD Guard and a former Argyll and Sutherland Highlander who saw service in numerous places including Northern Ireland, Cyprus, Colchester, the Falkland Islands, Canada and Germany between 1980 and 1992.

Steven has maintained links with his regiment and is West of Scotland treasurer Argyll and Sutherland Highlanders Association.

Iniesta? Robben? John's the ABW World Cup hero



Ivory Coast and Serbia after the final of the Laurels World Cup at Abbey Wood

MOVE OVER Iniesta, Forlan and Robben – step forward John McKenna of Abbey Wood as the World Cup's top scorer.

John struck five times as his Ivory Coast team defeated Serbia 10-5 in the final of the Laurels-Britvic World Cup soccer tournament held in the sports hall at Abbey Wood on 14 July.

Thirty-two teams lined up for the World Cup tournament with Portugal and Mexico making it through to the semi-finals before tasting defeat.

Britvic and Mars backed the event with Britvic providing a superb trophy and kit bags full of Gatorade goodies for the finalists.

Both sponsors provided refreshments for crowds and players while Debut gym staff officiated during the competition.

Ivory Coast: Chris Misir (capt), Nick Jefferies, Jonny McKenna, Duncan Marshall, Rich Phillips, Andrew Owen
Serbia: Gary Board (capt), Rob Balls, Ralf Rozengranz, James Burt, James Hallet, Rob Ryder.



Commodore David Marsh and CPO Lynne Joyce at Portsmouth

Lynne rewarded for her Navy service

CHIEF PETTY Officer Lynne Joyce has been presented with a Clasp to her Long Service and Good Conduct Medal for 30 years' service in the Royal Navy.

For the past two years, Lynne has been working within DE&S on the

Management of the Joint Deployed Inventory (MJDI) project.

She is part of the tri-service team developing future logistic business processes that will be implemented at all front line units, both deployed and in the UK.

Carrier team on a mission to inform the public

THE PUBLIC has had a chance to see progress on the Queen Elizabeth class aircraft carriers at an *HMS Collingwood* open day.

A display stand formed part of organised tours of the equipment sections in the Weapon Engineering Training Unit.

Tours allowed visitors to get up close to some of the mission systems currently in service in the Royal Navy, with the QE class stand at the end of the route to give perspective on the future.

Mission systems for the carriers comprise the command system, weapons, sensors, communications and network infrastructure that together will provide the new ships with their warfighting capability.

The lead for the systems design lies with BAE Systems Insyte, with a team of embedded naval clients providing assurance and assistance.

Organised by Lt Ben Dillon with Lt Cdr David Wright and Lt Cdr Phil Norman, the stand comprised projectors running animations of operations on the flight deck and the latest build strategy, alongside static displays giving some key facts.

Serving personnel also dropped by, including Commander-in-Chief Fleet, Admiral Sir Trevor Soar.

Clyde base rustles up a birthday treat

CLYDE NAVAL base hosted a celebrity guest when action man and TV survival expert Bear Grylls dropped in for a visit.

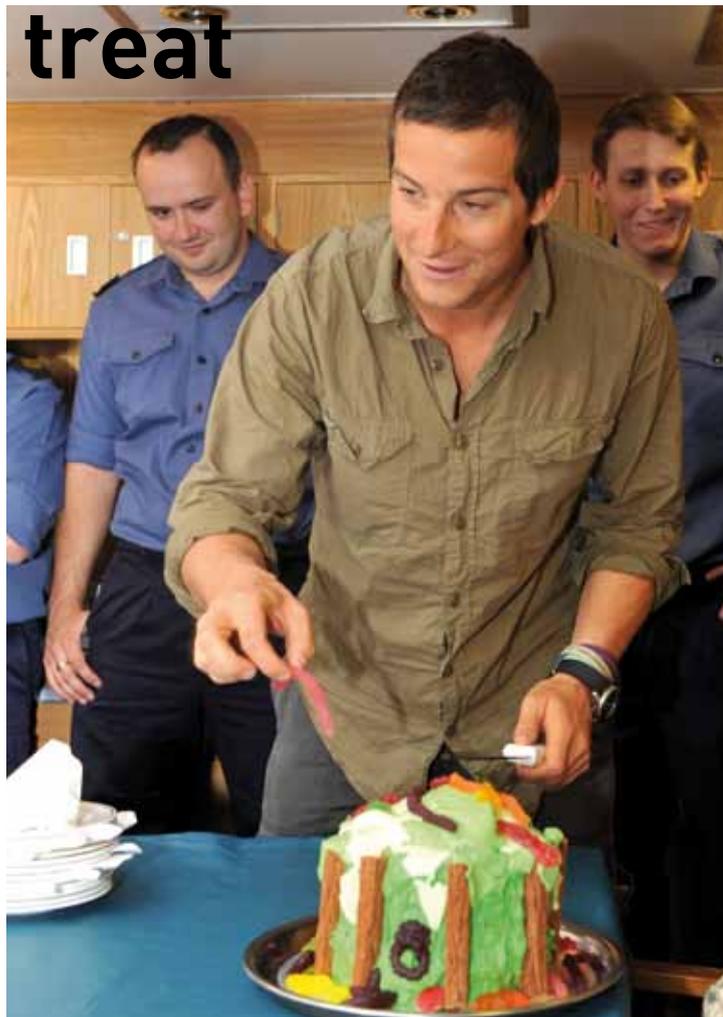
As well as being the UK's Chief Scout, Bear is also an honorary Lieutenant Commander in the Royal Naval Reserve.

Bear and his family were in the area and jumped at the chance of a base tour.

The visit coincided with Bear's 36th birthday. During a tour around *HMS Vengeance* the adventurer was treated to a jungle themed birthday cake, made by the submarine's chefs and decorated with trees and snakes.

He also stopped off to speak with Royal Marines from Fleet Protection Group's Boat Troop where he was given a look at their new off-shore raiding craft.

Bear is no stranger to the forces or to traversing the waters. He was part of a five-man team who completed the first unassisted crossing Halifax, Nova Scotia to John O'Groats in a rigid inflatable boat.



Birthday boy: Bear Grylls celebrates in the wardroom of *HMS Vengeance*



Baz is the 2010 fuellers' fueller

STAFF SERGEANT Baz Langley from Defence Fuels Group at West Moors has been awarded the 2010 Fuellers' prize by the Worshipful Company of Fuellers for his outstanding service.

SSgt Langley has been employed as the West Moors depot superintendent since 2008 and has

been instrumental in delivering uninterrupted fuel support to Front Line Commands, while maintaining a watchful eye on the safety integrity of the fuel infrastructure.

He is pictured receiving his Fuellers award at Mansion House, London as Prince Edward looks on.

