

desider

Dec 2012 Issue 55

the magazine for defence equipment and support



Ministry of Defence



Splashing out on flexibility

Warrior capability sustainment one year on [See inside](#)



Victory 'undressed'



Trident bursts into life



Spadeadam in from the cold



Innovation helps skiers



Principles for future forces

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from **up there**

to ensure smooth passage
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cover image

A Pacific 24 with a crew from DE&S cuts through the waters of Portsmouth Harbour in the latest acceptance trials of another batch of the versatile rigid inflatable boats set for the Royal Navy and Royal Marines

Picture: Andrew Linnett

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Bernard Gray

Chief of Defence Materiel

'If Ministers decide to go forward with a competition, we hope to launch that some time in the first quarter of next year'



I was very pleased to support the Minister for Defence Equipment, Support and Technology, Philip Dunne, when he gave an update on the Materiel Strategy to the House of Commons Defence Committee last month, during an evidence session on Defence Acquisition.

Value for money work comparing the Government Owned Contractor Operated (GOCO) and Executive Non-Departmental Public Body options was completed over the summer and reviewed by DG Finance and is now being considered by MOD. Mr Dunne explained the current position – that if value for money is demonstrated then a GOCO model would be compared to a baseline that would be an improved DE&S, or “DE&S+”. There would be an investment appraisal and a tendering process for potential contractors would be undertaken.

I supported the Minister by telling Committee members that we are now going through a second round of “soft market testing”, during which we are seeking industry’s views and ideas, including on how a competition could best be run.

We are also discussing with companies the business aspects on which they could sensibly bid, to make sure that we ask the most appropriate set of questions before we map out how a competition might work most effectively. If Ministers decide to go forward with

a competition, we hope to launch that some time in the first quarter of next year.

I normally like to take this opportunity to comment on the achievements of important project milestones and pass on my congratulations to those involved. But this month I have selected a rather different area to highlight – the Demonstration and Shakedown Operation (DASO) conducted for the strategic deterrent submarine *HMS Vigilant*, during which a Trident missile fitted with dummy warheads was successfully launched.

The successful DASO was the result of over two years of detailed planning involving DE&S teams, other parts of the MOD, the Royal Navy and US Navy and US and UK support contractors. I wish to extend my congratulations to all involved, both inside and outside DE&S.

DASO is an example of the great complexity of some of the tasks which DE&S carries out and an example of the importance to our work of having some of the best and most experienced people in key specialised fields.

I also offer my very warmest congratulations to all of the DE&S teams that were recipients of this year’s much sought-after Min(DEST) Acquisition Awards.

Finally, I would like to take this opportunity to extend my very best wishes to you all for a very happy and well-deserved Christmas break.

COMMITMENT to the Warrior Capability Sustainment Programme has been vigorously reinforced by DE&S and the Army at a Lockheed Martin stakeholder day.

Chief of the General Staff, General Sir Peter Wall, joined DE&S’ Chief of Materiel (Land), Lt Gen Chris Deverell, capability directors and senior officials of Lockheed Martin at its Ampt Hill plant on 13th November.

The improved Warrior infantry fighting vehicle will give the Army a massive increase in capability when it comes into service towards the end of the decade.

It will provide the backbone of the British Army’s land environment capability towards 2035 and beyond.

Lt Col Howard Pritchard, requirements manager for Warrior with DE&S Combat Tracks Group, regards the £1 billion programme as his and the Army’s highest priority.

“The Army’s capability is not just going to be improved by this programme, it will be absolutely transformed by it. Armoured infantry will be at the front and centre of Army capability and Warrior will be its backbone,” he said.

“The ability to have stabilised cannon giving greater accuracy and effect against future dismounted troops and other armoured fighting vehicles will transform the capability we have. Fire on the move is not something we have been able to do properly so the new Warrior will be a totally different proposition. The Army will have to step up its capability to that which this platform will offer.”

Lt Col Pritchard was speaking as the Warrior Capability Sustainment Programme celebrated one year since contract signing. It is well into its demonstration phase with Lockheed Martin meeting its design milestones so far this year at Ampt Hill. Production is due to start in 2016 with a planned in-service date of 2018.

Under the banner of improving reliability, survivability, lethality and fightability the programme will introduce major improvements to the current Warrior, including fitting and integrating the CT40 weapon system in a new modernised turret. The CT40 weapon and ammunition handling systems will be integrated with a stabilised sight to improve its fire on the move capability.

Chassis updates include electronic,



Above: Lt Col Howard Pritchard, centre, in front of Warrior at Ampt Hill

Warrior – one year on



Pictures: Andrew Linnett

Army's 'high priority' programme well on track

environmental, power and survivability improvements, giving the driver and commander better situational awareness. Air conditioning will make life more comfortable for up to seven soldiers, plus the three crew, who will also be able to make better use of increased system power.

More cameras, including night vision for the driver, will improve awareness of external threats. Open electronic architecture and better armour protection for both turret crew and passengers will greatly improve safety.

Modular protection across the chassis will enable armour to be rapidly changed to combat specific threats.

"We are integrating new technologies onto the existing platform around space, weight, height and power and are making good progress on all these fronts," said Colin Gilding, Lockheed Martin's WCSP manager.

"Since contract signing in October 2011 we have been going through the systems engineering process and we went through the systems architecture design review this November. It's been a challenging year for the programme but we have 120 people working on it and the team is building well. There are shared goals and visions and a pride and enthusiasm for Warrior as a programme."

Mr Gilding added: "We've got a lot of kit and people to incorporate into this vehicle – a legacy vehicle – and from the human factors point of view that is quite challenging. We're also concentrating on commonality with the Scout Specialist Vehicle turret programme and are striving to get as much as we can to be common between the two vehicles. Advantages include lessons learned in reliability and ordering more of the same, which gets the unit price down."

During the demonstration phase 11 vehicles – six section vehicles, two command, and one each of recovery, repair and recovery, and forward observation vehicles – will be built.

They will trial nearly 200 battlefield missions covering around 35,000 kms. Around 23,000 CT40 rounds will be fired to test reliability growth of the new weapon system. At the moment, the programme is scheduled to deliver 381 upgraded Warriors.

Leading companies involved in the programme include Curtiss Wright, Ultra Electronics, Thales UK, Moog, Rheinmetall and Caterpillar, along with BAE Systems as legacy vehicle design authority.

"I'm confident we will achieve first land firings in 2014 with our critical design review in the first quarter of 2014, which is ahead of contract dates," said Mr Gilding.

"Warrior is in safe hands, and we will deliver it."

More companies sign up for Warrior work

DESIGN SPECIALISTS MIRA and Ultra Electronics are the latest sub contractors to come on board the Warrior programme.

MIRA staff will work with Lockheed Martin engineers at a new facility in Nuneaton on mechanical design, electrical design and systems integration.

Ultra Electronics Precision Air and Land Systems will carry out work in Cheltenham on Warrior's power distribution system, the cannon control unit and fire control computer. First units of the fire control

computer will be delivered early next year.

Around 20 key suppliers, supported by sub-contractors, will be contracted by LM to support the programme. Around 600 jobs will be created or sustained, with 90 per cent of the work completed in the UK.

Meanwhile Lorica Systems UK has been chosen for final negotiations as the preferred turret armour supplier. Lorica is an armour and survivability joint venture between Marshall Land Systems of Cambridge and Plasan of Israel.



Above: latest addition to the programme is a £1 million motion test rig at Amptill to test turret stabilisation and performance. The rig will speed up development time, saving the costs of putting a real vehicle on a test track

Below: LM's Colin Gilding explains the new turret to General Sir Peter Wall (far right)



Babcock pledges systems innovation

BABCOCK HAS been awarded a contract for the system definition of the tactical weapons handling and launch system and submerged signal ejector for Successor, the *Vanguard* replacement submarine.

In delivering the contract the company will combine proven technologies with a number of innovative features.

Babcock will incorporate vertical embarkation, modular torpedo launch tubes and stowages as new features.

This will provide a pre-assembled solution to accelerate installation times during build and reduce overall assembly costs.

The company will also develop a weapon loading mechanism that allows weapons to be loaded from both tiers using the same mechanism.

Further developments include an improved launch control system.

130 work on Successor

THE number of MOD staff employed solely on the Successor submarine programme is approximately 130, according to figures released in Parliament by Philip Dunne, Minister for Defence Equipment, Support and Technology.

Others also contribute to the programme. This figure will change as the programme progresses.

Successor – the design phase gathers pace

DEFENCE SECRETARY Philip Hammond has repeated the Government's commitment to a submarine-based nuclear deterrent.

His comments come following a test firing of a Trident missile from *HMS Vigilant*, and the announcement of further funding for the next phase of design work for Successor, the future generation of UK nuclear-armed submarines.

"Our continuous submarine-based nuclear deterrent is the ultimate safeguard of our national security and the Government is committed to maintaining it, both now and in the future," said Mr Hammond.

"The test firing and further investment in replacing the deterrent demonstrates that commitment. This latest expenditure for the next generation of nuclear-armed submarines is an investment in UK security and the British economy, sustaining high-quality jobs and vital skills."

Around 1,200 jobs will be sustained by the £350 million worth of funding,

a second tranche of money following the initial £350 million worth of design work announced earlier this year.

The four *Vanguard* class submarines, of which *HMS Vigilant* is one, will be replaced from 2028 by the Successor which is currently being designed by British companies. BAE Systems will proceed with £315 million

worth of work, with a further £38 million at Babcock.

John Hudson, Submarines Managing Director at BAE Systems Maritime, said: "The design of a nuclear-powered submarine is one of the most complex and technically demanding engineering programmes undertaken by the maritime industry. This further work underlines the MOD's



Above: Philip Hammond on a visit to Faslane in October. Left: *HMS Vigilant* prepares to launch a Trident missile during a recent test



confidence in our ability to deliver a design that will meet the future needs of the nation's nuclear deterrent.

"The design phase is gathering momentum, and behind the scenes we are working hard to maintain this by ensuring we have the correct skills and resources in place. While more than 1,000 people are involved in the programme, we continue to recruit many more professional design engineers."

All Royal Navy submarines will be based at Faslane by 2017, including the *Astute* and *Trafalgar* class attack submarines.

The MOD announced approval in May last year for the Successor programme design phase, costing £3 billion.

■ Testing the nuclear deterrent: pages 24, 25

Reactor control work begins on Vengeance

A NEW Reactor Control and Instrumentation system is to be fitted to *HMS Vengeance* by Babcock during her Long Overhaul Period and Refuel at Devonport – the first installation of the new system on a submarine.

The system has been developed by Rolls-Royce to replace the Pressurised Water Reactor 2 system designed in the mid-1980s. While the existing system functions well, through-life costs are increasing due to

obsolescence. The new system is modern and efficient, enabling a dramatic reduction in the variety of spares, which drives cost and efficiency savings for the customer.

The first installation, at the Shore Test Facility in Scotland earlier this year, was led and completed by Rolls-Royce, supported by Babcock. Installation on *Vengeance* is expected to take more than two years to complete.

Our engineers are proud to be working with the British Sailing Team as part of a £1.5M technology partnership BAE Systems has with UK Sport. Using systems originally designed to aid decision-making on the battlefield, we're helping the sailors prepare for the heat of competition. Sports and engineering – a winning combination!

OUR TECHNOLOGIES HAVE BEEN USED BY UK SPORT TO HELP THE SAILING TEAM NAVIGATE DEEP WATERS.



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Poppies with a difference

MORE than £1,000 has been donated to the Royal British Legion's poppy appeal from submariners at Devonport. Sailors from Flag Officer Sea Training (Submarines) collected donations for a poppy with the submariners' dolphin symbol beneath it to commemorate submarines lost at sea. The 500 poppies sold out in less than 48 hours. Donations were handed over to the Royal British Legion in Plymouth on Remembrance Sunday.

■ DE&S Remembers: page 38

Learning from experience

BILL Chrispin, leader of DE&S' Airseeker team, will host a Learning From Experience seminar on 'Helix to Airseeker: Assessment Phase Experiences' in the Abbey Wood lecture theatre on Monday 10th December from 1-2pm. It is open to all DE&S staff with places available through Event Booking and will be the last organised through the LFE hub. Future seminars will be organised through operating centres and functional areas when necessary.

Just the ticket

TICKETS for Troops distributed its 300,000th free ticket last month, days after the scheme marked its third anniversary. Since launch, Tickets for Troops has been providing free tickets to personnel for top events across the UK, including the Brit Awards and FA Cup Finals.



New kit comes early to give soldiers a boost

DE&S' SOLDIER System Programmes (SSP) has been able to commit £45 million this year to bring forward some planned orders for equipment and buy high-tech electro-optic equipment for dismounted troops.

This extra equipment will expand users' ability to 'train as they fight' and increase the availability of critical battle-winning capability.

Eight thousand extra lightweight daysights have been added to those already procured under the Future Integrated Soldier Technology Surveillance and Target Acquisition (FIST STA) programme.

Other elements of FIST STA have been brought forward, including 800 FIST thermal sights, 300 commander's target locators, around 400 lightweight Infantry periscopes and about 50 underslung grenade launcher fire control systems.

The new daysights will give dismounted troops improved situational awareness, as well as rapid engagement at close ranges due to the Close Quarter Battlesight mounted on top.

As well as these items, 5,675 head-mounted night vision systems were also brought forward into the current year, adding to more than 2,500 already delivered in year.

Given the tight timelines imposed by the funding process and the lead times of the

equipment being procured, this level of procurement was only possible through co-operation with industry, in forward planning of industrial capacity and agile reaction to potential extra options.

Head of Soldier Systems Programmes, Brigadier Mark Gaunt, said: "This has been a real challenge for project, finance and commercial staff in both the MOD and industry, and everyone has risen to that challenge with energy and dedication."

MOD approvals processes were further smoothed by maintaining close contact with the military customer and the DE&S assurance community.

Colonel Charlie Sykes from

the new Capability Directorate Combat at Army Headquarters said: "When our soldiers go on operations we want them to be able to train and operate with the best equipment available. The new kit will help them do exactly that."

"We are delighted to have helped get this equipment into the hands of troops earlier than planned and properly integrated. It has been a major task and the whole team has put in a great deal of effort to get this right."

Below: co-operation with industry was vital to bringing the procurement forward. Sights are pictured in production



NEWSREEL

Reaper stats revealed

TOTAL financial approval for delivering and supporting the UK Reaper system from 2007, when it entered service, until the end of combat operations in Afghanistan in 2015, is £506 million, Minister for Defence Equipment, Support and Technology Philip Dunne has told Parliament. No decisions have yet been taken on whether to retain the Reaper system once combat operations end in Afghanistan. Reaper is the only UK remotely piloted air system and has been armed with precision guided weapons since May 2008.

Tornado sorties

THE cost of an average seven-and-half-hour Tornado sortie from RAF Marham to Libya during Operation Ellamy last year was approximately £37,000, according to Parliamentary figures. This figure is calculated using standard marginal flying hour costs and rounded to the nearest thousand. The average cost of a five-and-half-hour Tornado sortie from Gioia Del Colle to Libya was approximately £27,000.

UAS capability

THE MOD assesses there are approximately 80 states whose armed forces operate an unmanned air vehicle capability. Of these less than a dozen operate systems with capacity to be armed with missiles or other munitions, Armed Forces Minister Andrew Robathan has told Parliament.

Minister praises innovation in UK defence export drive

A FAMILY-OWNED West Midlands engineering company, which has provided equipment for a number of Afghanistan-bound urgent operational requirements, celebrated its 150th anniversary with a visit from new Minister for Defence Equipment, Support and Technology, Philip Dunne.

Oldbury UK in Wolverhampton makes land systems and ancillaries including enhanced mobility trailers, integrated platforms, heat shields and environmental shelters.

During his visit the Minister reviewed examples of equipment supplied to defence customers, including the MOD.

Mr Dunne said: "Oldbury UK has an illustrious history responding to the calls of our Armed Forces for the latest developments in military technology.

"The Government is committed to ensuring our personnel are provided with the very best equipment available. This can only be realised with the dedication and responsiveness of small and medium-sized companies like Oldbury UK, who play a vital role in the MOD's supply chain right across the country.

"Oldbury UK has embraced the Government's call for manufacturing firms to develop and diversify their businesses, invest in innovation and look confidently for new opportunities in world export markets.

"This matches my aspirations for the defence industry more widely and I congratulate the company for leading by example. It is this agility, flexibility and responsiveness that will help drive our economy in the right direction."



Above: Oldbury's Carl Holroyd and Colin Griffiths explain advanced CAD engineering data to Philip Dunne, watched by Group Managing Director Richard Skan and Oliver Welch, the Minister's Assistant Private Secretary and, left, Mr Dunne is welcomed by Pete Worrall, Chief of Materiel (Joint Enablers), on a visit to Abbey Wood last month

Carrier – inch-perfect!



THE FINAL hull section of aircraft carrier *HMS Queen Elizabeth* has arrived at Babcock's Rosyth dockyard.

The 11,300 tonne aft section of hull, known as Lower Block 04 (LB04), made its way under the Forth Bridges shortly before 11am on Remembrance Sunday before being inched slowly into the Rosyth dock.

To avoid bad weather, the section travelled all the way around the south coast to reach the Fife assembly site, a journey of more than 1,200 miles.

A complex engineering effort floated the block off its specialist barge to move it into the dock. The dock was then drained, with work starting to integrate all the sections.

Programme Director Ian Booth said: "LB04 is the final part of the hull to make the journey to the assembly site. This marks a huge milestone for the programme to deliver the nation's flagships.

"Now we begin the massive task of joining it to the sections of *HMS Queen Elizabeth* already in place."

NEWSREEL

MOD still a rapid payer

IN the last year to 31st March the MOD paid 99.72 per cent of all correctly submitted invoices within 11 calendar days. This contributed to the MOD's overall performance of 99.99 per cent over the 30 calendar day cycle ensuring compliance with its statutory obligations. MOD invoices, with the exception of some payments to suppliers made by units locally, are paid through Defence Business Services. For the first six months of the current financial year 99.48 per cent were paid electronically and 0.52 per cent by cheque.

DSG future

INFORMAL market sounding over the summer to gauge interest in acquiring the Defence Support Group and to gather market intelligence on how the sale may be structured to get best value for money for government and taxpayer has been described as 'encouraging' by Minister for Defence Equipment, Support and Technology Philip Dunne. Work will include a value for money assessment of the sale proposition.

TriStar costs

THE cost of extending the service life of the TriStar fleet from the previous out of service date of December 2013 to March 2014 is around £3.6 million, according to Philip Dunne, Minister for Defence Equipment, Support and Technology. It is too early to determine additional operating costs, he added.

Steria green light to carry on reference centre management

MANAGEMENT OF the Land Systems Reference Centre in Dorset will continue to be carried out by Steria.

The company has been awarded another five-year contract worth around £20 million to run the centre in Blandford.

The centre provides a test and reference capability for release assurance of all deployed land environment communications and information systems.

It ensures new information systems and updates to existing ones can live with existing

networks. Where issues arise the centre can replicate the environment and the problem to help technicians solve them.

The contract has been awarded by Corsham's Defence Information Services Team and has an extra one-year option.

The centre has operated as a Government-owned, contractor operated organisation since it was founded in 2003.

Transition to the new contract has already begun with smarter, more measurable objectives and incentives.

More Foxhounds on the way

£46 million contract continues vehicle's success story



Foxhound is pictured at Camp Bastion. Inset: the vehicle's front positions

THE SUCCESS of the Foxhound protected patrol vehicle has seen DE&S invest £46 million in acquiring 51 new vehicles for soldiers serving on the front line in Afghanistan.

Defence Minister Philip Dunne made the announcement on 23rd November during a visit to General Dynamics Force Protection's spares facility in Telford.

The contract is part of an overall investment of £340 million the MOD has made in Foxhound since 2010. It will help sustain jobs at Telford, the General Dynamics Force Protection HQ in Leamington Spa and across the UK in the Foxhound supply chain.

The first Foxhounds were deployed to Afghanistan last June and are being used by soldiers in mentoring and partnering roles with the Afghan National Security Forces.

Mr Dunne was joined

by Major Chris Thoms, requirements manager for DE&S' Protected Mobility team, on his visit. Mr Dunne said: "I was pleased to meet employees who have helped make Foxhound a real procurement success story, taking only 40 months to develop it from the initial design to deployment in Afghanistan."

"The work being done by staff in Telford is ensuring the vehicles can stay on the road to help our soldiers do the vital job of engaging with Afghan forces and protecting the local population."

"Balancing the MOD's budget means we can confidently invest in equipment like Foxhound, which has the flexibility and adaptability to operate in a wide variety of environments, providing capability for the Army well into the future. This investment shows the MOD playing its part in delivering growth and sustaining jobs in



the West Midlands industrial base."

Speaking in September, Chief of Staff for the Bastion Force Protection Wing, Squadron Leader Jim Stewart, said: "Foxhound is an enormous leap forward in capability; the off-road mobility, enhanced protection and night-vision systems that it offers to the troops on the ground are unmatched in a vehicle of this size."

The 51 extra Foxhounds will take the Army's fleet up to 376 vehicles.

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Trials and 'emergencies' will get T45s ready for the Fleet

THE SIXTH and final Type 45 destroyer has begun her second set of sea trials off the west coast of Scotland.

During her 19 days at sea which began on 16th November, *Duncan* is undertaking an extensive programme of trials, including final testing of the ship's power and propulsion, combat systems, navigational and communications equipment ahead of her handover to the Royal Navy next March.

Following her trials, *Duncan* will return to BAE Systems on the Clyde for final integration and testing, before setting sail for her home port of Portsmouth.

Meanwhile sister ship *HMS Dragon* took part in a rehearsal for the UK civil

emergency contingency plan, Operation Resilience, off Devonport naval base.

It was the latest chapter in her programme to become ready for deployment.

Above: *HMS Dragon's* Lynx helicopter is pictured during the ship's participation in Operation Resilience.

Right: *Duncan* heads for her second set of sea trials



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First Typhoons upgraded to boast advanced kit

UPGRADE OF early Tranche 1 Typhoon aircraft has been completed.

Under the programme known as Retrofit 2, 43 RAF Typhoon aircraft have been upgraded by BAE Systems to the Tranche 1 Block 5 standard, which includes installation of the forward looking infra-red system, sensor fusion and the enhancement of air-to-air capability. Improvements also include introduction of an air-to-surface capability and the ability to use the laser designator pod for precision weapon delivery.

Air Commodore Keith Bethell, Head of DE&S' Fast Air Support Team, said: "The Retrofit 2 programme was one of the first steps to deliver Typhoon availability and capability through a partnered

approach with BAE Systems. This early step helped lead us onto the highly successful Typhoon Availability Service into which Retrofit 2 was then subsumed. The conclusion of the Retrofit 2 programme is a significant milestone and one we will build on as we continue to grow the Typhoon Force."

Under the programme the last aircraft to be handed back to the RAF is British single seat Typhoon number BS23 (tail number ZJ932). The aircraft originally entered service with 3 Squadron on 10th November 2006, delivering Quick Reaction Alert duties from RAF Coningsby. The aircraft will return to service with 11 Squadron to provide a major contribution to the deployable Typhoon Force.

NEWSREEL

Marshall merger

MARSHALL Aerospace and Marshall Land Systems are to combine forces to become Marshall Aerospace and Defence Group on 1st January. Steve Fitz-Gerald, chief executive of Marshall Aerospace, will lead the new company. "We're embarking on a very profound company structural change to combine the skills, capabilities and experiences of two great companies," he said. "Marshall Aerospace & Defence Group will, from a business capabilities perspective, be greater than the sum of the parts, and we have a very strong platform from which to springboard into 2013."

Reserves overhaul

MEASURES to overhaul Britain's Reserve Forces have been published. Consultation proposes more training for Reservists, a 'kitemark'-type award for supportive employers, and changing the 'Territorial Army's' name to reflect their enhanced role. The number of trained Reserves will grow to around 35,000 across all three services by the 2020s. The Army will see the biggest change, with 30,000 trained Reserves creating a total land force of about 120,000. And the plans are backed by an extra £1.8 billion in funding over the next ten years for new equipment, uniforms and training for the Reserves.

Fort Austin back in the fold



RFA FORT AUSTIN is getting ready to return to operational duties after a regeneration refit lasting ten months.

The fleet stores ship, commissioned in 1979, had been at extended readiness for nearly two and a half years before the refit at Cammell Laird's Birkenhead yard on the Mersey which began last November.

Work, valued at around £40 million, was undertaken as part of DE&S' Royal Fleet Auxiliary through-life support contract.

Included in a lengthy list of major work were upgrades to steering gear, fire detection systems, communication systems, mechanical handling equipment, machinery control and surveillance systems and a ballast water treatment system.

Bridge navigation equipment has also been upgraded along with lifeboats and an updated bow thruster.

The ship can also boast new accommodation and galley areas, which saw the interior totally gutted during the removal of hazardous materials. Deckheads and bulkheads were removed in 128 cabins and offices over

seven decks. The internal work by Southampton-based Trimline Interiors has enabled maximum efficient use of space while providing improved habitability standards for officers and crew.

Trimline sales and marketing director Mike Oliver said: "This represents the biggest RFA project since we carried out a refurbishment on *RFA Argus* three years ago. Trimline is totally committed to the through-life strategy and to delivering continuous improvements on this and every project."

Cammell Laird managing director Linton Roberts added: "The sheer scale, complexity and volume of work delivered in a relatively short timescale is testament to what can be

achieved by the collaborative working partnership that exists between Cammell Laird, the MOD and the other suppliers."

Commodore (RFA) David Preston of DE&S' Commercially Supported Shipping said: "This is another successful project delivered as part of our through-life support strategy for the RFA ships. I am pleased to see that the work on *Fort Austin* has been completed to a high standard and she has been delivered back into service."

Fort Austin has extensive aviation facilities, with two flight decks, one to the stern and one spot on top of the hangar. She also has the capability to replenish at sea via six replenishment stations, three on each side.

TRIMLINE WORK

- Complete strip out and replacement of furniture, bulkheads, flooring and deckheads.
- Spaces resized, new bulkheads, deckheads, furniture, carpets and soft furnishings made and installed.
- More than 10,000 days for a team of up to 70 on site for nearly a year.
- More than 17,400 m² of flooring and panelling – equivalent to 2½ football fields of area and materials, including 8,400 m² of bulkhead panelling, 4,500m² of various flooring, and 4,500m² of deckheads installed.
- More than 300 toilet areas, including 128 cabin wet units.
- More than 650 doors and hatches adjoining public spaces.
- Around 2,500 items of furniture
- More than 550 pairs of porthole, bunk and door curtains.

NEWSREEL

Reaper lands at Waddington

THE first remotely-piloted air system squadron to be based in the UK – the RAF's 13 Squadron – has been established at RAF Waddington. The squadron will control via satellite Reaper MQ-9 aircraft based in Kandahar in Afghanistan. The primary role of UK Reapers is to provide intelligence, surveillance and reconnaissance. The Reaper programme is managed by DE&S' Unmanned Air Systems team which has delivered new equipment, support, training, communications and infrastructure for the programme. As of 22 October 2012, UK Reaper had provided more than 40,000 hours of intelligence, surveillance and reconnaissance to UK and coalition forces in Afghanistan.

Flower power

PLANTS could be used to detect nerve agents, toxic substances banned by the Chemical Weapons Convention (CWC). Identification of chemical warfare agents is essential for verification of compliance with the CWC. But detection is often difficult as chemicals can be absorbed by soil or washed away by groundwater. Scientists from the Defence Science and Technology Laboratory have found that certain plants – such as the common mustard plant – can absorb the nerve agent from contaminated soil, which can then be extracted from the plant using ethanol.

Tide class: how the future MARS tankers will look



Return of the Tides

FOUR NEW support tankers ordered by DE&S earlier this year will be called the *Tide* class.

The 37,000 tonne ships will come into service in 2016 to replace the Royal Fleet Auxiliary's single hulled tankers to maintain the Royal Navy's bulk fuel replenishment-at-sea capability.

They have been bought as part of the £452 million Military Afloat Reach and Sustainability (MARS) programme.

The 200-metre long tankers will also be able to take helicopters and will support the Royal Navy warships deployed around the world.

Head of the RFA Commodore Bill Walworth said: "I am absolutely delighted that we are able to announce that the MARS Fleet tankers will be called the

Support tankers to take on famous names

Tide class. The original Tides were the first purpose-built fleet tankers to support aircraft carriers and were highly successful and popular ships. The new *Tides* promise to be better still.

"A large number of people have worked hard to get us to this point, with the ships on contract and the first to be delivered into service in 2016.

"*Tidespring*, *Tidesurge*, *Tiderace* and *Tideforce*, a new name, will be superb ships that will reflect the successful past

and a confident future for the RFA service."

The ships will be built by South Korean firm Daewoo Shipbuilding and Marine Engineering to a design from UK company BMT Defence Services.

UK companies will benefit from around £150 million of associated spending on key equipment, systems, design and support services, and on the customisation and trials package which will take place in the UK once the ships have been built.

The original *Tide* class was a series of six replenishment oilers used by the RFA and later the Royal Australian Navy, and the Chilean Navy.

The original *Tidespring* was awarded the Falkland Islands Battle Honour in 1982, operating in support of the recapture of South Georgia and then sustaining the fleet off the Falklands.

After service in the Suez Crisis, *Tiderace* was renamed *Tideflow* to avoid confusion with another ship name. *Tidesurge* served until 1976.

'A large number of people have worked hard to get us to this point, with the ships on contract and the first to be delivered into service in 2016'

ELECTRICAL PROPULSION technology for the new fleet of MARS tankers will be provided by GE Energy's Power Conversion business.

GE's drive train will be installed as a key part of the ships' hybrid propulsion configuration that is more fuel efficient than conventional propulsion.

Hybrid propulsion systems combine electrical and mechanical technology to turn the ship's propeller.

When the ship operates at moderate and low speeds, the propeller shaft is turned using GE's electric motor and variable speed drive controller system.

Meanwhile, at high speeds the diesel engine or gas

Firm signs up to power the tankers

turbine is connected directly to the propeller through a gearbox. This hybrid configuration is particularly suited to the fluctuating speeds needed by warships and auxiliary vessels.

Safeguarding jobs in the UK, GE will begin delivering its systems to Daewoo for the first tanker in the fourth quarter of 2014 and is scheduled to finish supplying equipment for the fourth MARS tanker by the second quarter of 2016.



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NEWSREEL

Maritime research

A new three-year contract worth £32 million will see BAE Systems explore ways to gather and process information to aid battlespace command above and below water. Known as the Maritime Collaborative Enterprise it will be managed by the Defence Science and Technology Laboratory (Dstl). Dstl's David Sherburn said: "This is a major milestone for the maritime domain, and an exemplar of how Dstl, industry and academic partners work together, ensuring comprehensive support from the UK defence supply base for the benefit of UK Forces. This consortium will enhance the MOD's research into above and underwater capability and provide real impact for MOD."

Army recycling

THE Army has joined the Canadian Armed Forces' recycling contract at British Army Training Unit Suffield in Canada and expects to save £950,000 per year as a result. By continuing to work with the Canadians, other potential recycling opportunities are being identified, which may produce further savings in the future, Defence Minister Mark Francois has told Parliament.

Ship software

PARAMARINE software, developed by QinetiQ, has been chosen by Rolls-Royce to support the company's newly-formed team dedicated to development of naval ship design.

Leased kit keeps RAF snappers in the picture



Left: St Mawgan up and running - Color Confidence's Jon Price shows RAF photographer Cpl Tony Rodgers how to colour manage the newly-installed photographic digital workstation

Pictures: James Hennessey and Sgt Vince Roberts

DE&S helps photographers keep up with the digital age

ALL ROYAL Air Force photographic sections have now been equipped with the most up-to-date kit in the latest tranche of a rolling lease programme.

The most recent installation involved nine RAF stations and was completed in October at RAF St Mawgan in Cornwall. The stations now have the latest digital photographic suites and computer workstations supplied under one contract between DE&S' Soldier Systems Programmes and Calumet Photographic, who provide the cameras, and Color Confidence who supply digital workstations and calibration.

Project manager James Hennessey said: "The original procedure of setting up a contractor-based leasing programme for equipment has enabled the photographic trade to keep abreast of the rapid technological changes to equipment associated with capture, manipulation, output and archive of digital imagery.

"The leasing procedure has



Above, from left: Cpl Tony Rodgers (RAF), Mr Pete Holland (Color Confidence), Mr Jon Price (Color Confidence) and Mr James Hennessey (DE&S) stand in front of a Shackleton gate guardian at RAF St Mawgan, the last section to receive new equipment during this year's installation of RAF photographic leased equipment

ensured the RAF professional photographic trade has evolved with the digital age without financially committing to procurement of equipment that quickly becomes obsolete.

"Within the current equipment tranche system, risk for installation, through-life support and disposal of the equipment has been transferred to industry which achieves savings to the current budget."

WO Mick Gladwin of RAF Photo Policy added: "Leasing the majority of our photographic capability simply works; the Ground Photographic Sections get the equipment they require to carry out all of their

imagery tasks in support of RAF operations in the UK and overseas."

Advances in digital photography, challenges to through-life support and the need to replace obsolete analogue photographic and processing equipment demanded new and innovative ways to equip 33 RAF photographic stations along with four training classrooms at the Defence School of Photography.

Contractors will also provide a 48-hour turnaround of unserviceable items which reduces the section downtime to a minimum and allows for more efficient support to operations.



Air traffic management is a vital service at around 100 MOD sites
Inset: Simon Gadd

Companies line up with their air traffic plans

THREE COMPANIES have been invited to present their plans to replace worldwide MOD-owned air traffic management services.

Bidders have been chosen from a field of eight to receive DE&S' Invitation to Participate in Dialogue and have been on familiarisation visits to sites. They will present their ideas in the New Year.

Project Marshall, in DE&S' ISTAR Operating Centre, will deliver modern, reliable, up-to-date military air traffic management to all MOD-operated sites in the UK, permanent bases abroad and to support UK and deployed forces worldwide.

A £330 million investment in

equipment and infrastructure will allow aircraft to operate more safely in all weathers. It will significantly improve availability of assets, aligning them more closely with the civil sector.

The new service will merge around 80 contracts covering about 100 sites into one, making air traffic management more efficient. Training of operators and maintainers will also be included.

The Marshall team, set up last February, has overcome delays and challenges to reach this milestone and is recruiting staff in preparation for competitive dialogue.

From next March the three

bidders will each attend a series of week-long meetings with the team and advisors to discuss how they intend to run the service, and the contractual terms.

Marshall team leader Simon Gadd said: "It has been a fantastic effort to achieve this key milestone and I am indebted to my team and the stakeholders in Front Line Commands and other budget holders who have helped us develop the documentation.

"Being part of Marshall is an excellent opportunity to get engaged in a fascinating project that will deliver a critical service to Front Line Commands, and realise benefits to the MOD."

Shepherd all set to improve capability

A DE&S team is working on Project Shepherd to replace the Defence Electronic Warfare Database with an improved capability.

The Joint Electronic Surveillance team is working with the Defence Electronic Warfare Centre at RAF Waddington and Team Excalibur, a contractor consortium led by Logica supported by MASS Consultants and Syracuse Research Corporation.

This is the first stage in a larger programme to improve end-to-end electronic warfare operations support for UK Forces. It will greatly improve delivery by the Defence Electronic Warfare Centre.

Along with providing enriched data structures that will enable a better description of electronic warfare information, Project Shepherd will enable automatic manipulation of electronic warfare data, supply a suite of electronic warfare operational support tools as well as providing better collaborative working and improved data dissemination.

The project will provide a crucial step-change in automated end-to-end capability that will support improved situational awareness and platform protection.

Operational staff are already benefitting by familiarising themselves with the developing solution following delivery of the first of three incremental builds last June.

Paul Hamley, who leads the project's management team, said: "This is a complex project that is already enabling users to familiarise themselves with initial models of the system.

"All stakeholders are working towards the project's in-service date and meeting the requirements of the Defence Electronic Warfare Centre in this challenging but critical field."

Lightning II test sorties soar past the 500 mark

THE INTEGRATED Test Force which is running testing of the Lightning II F-35 aircraft in the US has completed its 500th sortie.

Flight testing for the F-35B short take-off and vertical landing version which the UK will operate, and the F-35A conventional take-off jet, began in the US in March. The team accomplished the 500 sorties in 238 days cutting the time between each milestone sortie:

Latest deliveries of the F-35B have seen three more delivered to the US Marine Corps at Air Station Yuma in Arizona. It marks the beginning of tactical operational training at the base.

These aircraft increase the number of STOVL aircraft delivered to the Marine Corps to 16 and bring the total number of F-35s delivered in 2012 to 20. Two have so far been delivered to UK staff in the US.

Delegates updated on US-UK treaty

NEARLY 100 delegates gathered in central London at an event co-hosted by ADS – Aerospace, Defence Security – and Reed Smith to learn about progress since the US-UK Defence Trade Co-operation Treaty came into force last April.

Representatives from both governments attended along with the ADS Group and a range of defence and security companies.

Simon Cholerton, DE&S Chief of Staff, and Beth McCormick, Deputy Assistant Secretary for Defense Trade and Regional Security at the US Department of State – the respective country leads on Treaty implementation – were open about their desire to work with the Treaty, and their efforts to adapt it with the goal of increasing transatlantic defence trade.

Devonport leadership

NAVAL BASE Commander, Commodore Graeme Little, hosted a workshop at Devonport in October entitled 'Leadership and Your Behaviours through Change and Uncertainty'.

Cdre Little said: "The event was to improve engagement and encourage good behaviours across the senior leadership in Devonport, and develop a shared narrative of leadership.

"The key outcome was to develop peer networks across the base and enable leaders to better understand their roles and the importance of behaviours in implementing and leading change."

The MOD's Director of Transformation, Dr Roger Hutton, provided a brief on Defence Transformation.

Vice-Admiral Andrew Mathews, Chief of Materiel (Fleet), commander of the naval base ten years ago, also attended the event.

Team looks to revamp fuel supplies . . .

NEW ARRANGEMENTS for acquisition and supply of bulk fuels for UK Forces are in the concept phase.

As part of the Logistic Commodities and Services Operating Centre, the Fuelling Future Force 2020 (3F20) team is developing an end-to-end solution for initial gate approval of a new support arrangement by October 2015.

The 3F20 project will replace arrangements, managed by the Defence Fuels and Food Services team, which combine acquisition and supply.

Initial acquisition is provisioned under the Bulk Fuels Framework Agreement, allowing approved suppliers to compete for providing fuel through mini competitions, delivering a resilient and value for money solution. Separate supply chain agreements have existed to support the delivery.

The 3F20 project is also responsible for considering the optimum distribution, storage and support chain elements that are essential to delivering fuel to the UK military and its worldwide allies.

The team has published a Request for Information, marking a key milestone in its engagement with industry. The team hopes to benefit from the lessons learned from the current arrangements and use commercial best practice to deliver value for money.

Neil Firth, Director Logistic Commodities and Services, said: "I am pleased to be able to offer defence the opportunity to re-examine the provision of fuels to the Armed Forces. The new solution will prove value for money and will also ensure availability of this key enabler continues well into the next decade."



. . . while industry is invited to help cut fuel costs

COMPANIES ARE being invited to come up with ideas to bring down the fuel costs of the British Army's fleet of more than 50,000 vehicles.

Up to £100 million is spent a year on fuel, a bill which continues to rise.

"As environmental energy efficiency targets become more stringent, considerable appetite exists to see what

role technology might play in making our vehicle fleet more energy efficient," said Mike Batty of Director Technical's Technology Delivery team (Land).

"It is well known that the automotive and motorsport industries are investing in technologies that are more efficient and sustainable – these technologies may be

transferable to the military environment."

Reducing reliance on fossil fuels and operational energy consumption will reduce operational risk. The Defence Business Plan commits the Forces to reduce fossil fuel consumption by 18 per cent by 2020/21 from a 2009/10 baseline.

The team will run an Energy Efficient Vehicle Technology Demonstrator project to find technologies that either improve fuel efficiency or increase power generation.

Ideas should be able to be retro fitted to the existing vehicle fleet. The team, at this stage, is concentrating on small patrol vehicles, such as Jackal, and medium logistical vehicles as suitable test platforms.

Companies will display the best ideas in front of DE&S experts early in the New Year.

Operational fuel-handling contract awarded

A JOINT Operational Fuel System contract has been awarded to KBR.

The global engineering company will supply the MOD with fuel-handling equipment which will be used on operations and in support of military exercises worldwide. The contract is for an initial two-year period and will involve the supply of equipment and services worth approximately £25 million.

"The award of this contract is key to the strategic development of our UK-based support to the MOD," said Andrew Pringle, President, International Government, Defence and Support Services (IGDSS). "The MOD remains a key client of IGDSS and we look forward to ensuring that the MOD continues to receive outstanding support."

It's good to talk in Kabul!

Corsham team provides secure comms for UK personnel in Afghan capital

The Engineering Operations team for the Kabul network was a mixed civil service and military team. It included project manager, Sqn Ldr Gavin Wedlake from Corsham, and personnel from the CIS 1 section at Henlow led by Keith Broom, and the CIS 4 section at Blandford, led by Capt Brett Palmer. This ISS team worked with personnel from the deployed Campaign Signal Regiment and 90 Signal Unit RAF to deliver the final elements of the network.



Left: Sqn Ldr Gavin Wedlake and Capt Brett Palmer are pictured as the project reaches full operational capability while, above, an Afghan Wireless Communications Company technician climbs a communications tower at the headquarters of the International Security Assistance Force

A MAJOR communications project to deliver secure voice and data services to UK personnel at sites across Kabul has achieved full operational capability.

There are 500 UK personnel in the Afghanistan capital with another 200 due in the Afghan National Army Officers' Academy from next September to help train future officers.

Coalition personnel are under threat when moving around Kabul. And there is a growing demand for information services which improve safety and provide better support for current operations and longer term tasks in Afghanistan.

Inspired by the success of the Kestrel project in Helmand, DE&S' Information Systems and Services (ISS) Operating Centre was asked to deliver similar improvements in Kabul.

ISS designed and installed a modern commercial data network – the Kabul ICS Network – which has provided military broadband services across Kabul and linked them to the rest of defence.

Early wins included services like Housekeeper and Joint Personnel Administration to isolated places. The final phase, supported by the ISS Networks team, began in July with deployment of a project team from ISS Service Operations.

The project required installation of dedicated radio links and switching equipment, purchase and integration of commercial communication services provided by the Afghan Wireless Communications Company, and the use of long fibre optic links. This was done against a background of violent protests in Kabul.

The project was carried out in two stages: installing new equipment at main sites across Kabul; and migration of the information services onto the new network without disrupting operations.

Lessons learned from Kestrel helped the team to transfer information services smoothly onto the new infrastructure. Often working through the night to minimise operational impact full operational capability was achieved eight days ahead of schedule in September.

The team has been congratulated by Commander Joint Forces CIS in Afghanistan on the quality of the project which has made UK personnel in Kabul safer. The Kabul ICS network is now ready to be extended to meet the requirements of the officers' academy.

South Africa spotlight on Abbey Wood

SOUTH AFRICA'S Chief of Defence Materiel Antonie Visser, pictured far right, was welcomed to DE&S' Bristol headquarters on 30th October by Vice Admiral Andrew Mathews, the organisation's Chief of Materiel (Fleet).

Mr Visser was on a two-day visit to learn about UK procurement processes from policy formulation to delivery and upkeep of equipment. He received a DE&S overview and governance briefing

from Head of Corporate Approvals, Performance and Risk Mr David English.

Briefings were also provided on The Materiel Strategy by Head of Materiel Strategy Engagement, Mrs Dawn Cunningham-Martin, and the Type 26 Global Combat Ship by Rear Admiral Steve Brunton, Deputy Director Ships and Ship Acquisition at DE&S.

Mr Visser left Abbey Wood to visit Babcock International Group.



Gosport grabs Royce award

Young engineers impress in showcase of skills

IMPROVING PROCESSES as well as showing good engineering skills has seen Defence Munitions at Gosport triumph in the annual Sir Henry Royce competition.

Sam Jennings and Andy Leadbeater designed an engineer's workboard which impressed the judges of the Royce Foundation near Towcester enough to pip Luke Gosling of the Defence Support Group, Donnington to the top prize.

"Our idea originated from our time spent in one of our depot's work sections, as a device that could assist in carrying out the processes required while also improving working efficiency," said Sam.

"There were a variety of interesting aspects to this project, particularly learning new skills that we would not have otherwise encountered and having the opportunity to improve our current skill set with more challenging engineering problems.

"We found designing the

piece quite challenging as we had to continuously adapt and evolve our designs as the project progressed and new ideas emerged."

Andy added: "We were extremely pleased with the finished product as it was completely different to the idea we had first imagined. We were surprised with the result as there were strong entries from the other competitors.

"We found the Henry Royce museum extremely interesting, particularly to have the chance to see some examples of top quality engineering and provide us with something to aspire to. We would also like to thank the Henry Royce Foundation for supporting young engineers such as ourselves."

The project has been displayed at Defence Munitions Gosport's apprentice training building along with other examples of craft apprentices' work. It will be on display at the MOD's annual apprentice awards this month.



Among other Royce entrants were a team of Stuart Callard, Georgia McCarthy, Andrew Hall and Reuben Edwards for their work on an explosive ordnance disposal robot and another duo from Gosport, Elliott Rogers and Danny White, for their work on a Spitfire project.



Top: Sam Jennings and Andy Leadbeater took the Henry Royce award for Defence Munitions, Gosport. Above: Stuart Callard, Georgia McCarthy, Andrew Hall and Reuben Edwards of Abbey Wood

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Victory – reshaping of a national treasure

DE&S masterminds a multi-million pound project to give Nelson's flagship a new lease of life

She may look a little forlorn without her top masts – ‘undressed’ is the kinder word used by her DE&S support manager – but there’s no doubt the oldest commissioned warship in the world retains her iconic status.

HMS Victory is the jewel of Portsmouth’s historic dockyard and hosts around 350,000 visitors a year, even though she is a year into a nine-year programme of maintenance to preserve her for generations.

A DE&S contract for support and maintenance worth around £16 million went to BAE Systems with a team of experts, including Gloucester’s T Neilsen traditional shipbuilders and Bell Rigging, bringing their skills to the project. Work began last year.

“*Victory* doesn’t fit into any of the normal MOD contract envelopes,” said Anne Straw, the manager who took on the project for DE&S Ships Operating Centre in 2010. “She doesn’t boast capability, for instance. And the kind of people who are best placed to look after her are not the ones who would comply with normal MOD requirements. But we now have people in place who are known

■ continued on page 22

From an original oil painting by Mark Hawke, DE&S Graphics



'It has been the chance of a lifetime for me. Where else would you get to look after a ship that is known the world over? It will be a subject of future dinner conversations no matter where I go or who I meet. It is a job like no other' – Anne Straw, DE&S Victory support manager



Anne Straw, in front of an 'undressed' HMS Victory



■ continued from page 21

across the world for their conservation work on such historic ships. The new Team Victory is ideally placed to support the vessel, and their passion and drive is evident in all the work being undertaken.”

Victory's most pressing problem, literally, is water, not from below – she’s been in dry dock since 1922 – but from above. A temperate UK winter takes its toll on timber from the 6,000 trees used to build the ship. “Water is the biggest single threat to her; it causes considerable damage to old and new timbers alike,” said Anne. “The wooden construction needs constant maintenance to keep water out and areas that have got wet need to be dried. Earlier this year our traditional shipwrights, Tommi Neilsen, recalculated the forward end of the upper deck using traditional oakum and pitch, a technology used in Nelson’s day. This replaced the modern materials that had been used in a more recent repair, not only because it’s important to retain historical accuracy, but also because this technology is easier to repair and maintain than some of the modern counterparts.”

The last time *Victory's* sides were replaced was in the 1970s. Around £5 million worth of teak – more resistant to water than oak – is currently in storage to be used as part of the refurbishment. Now more radical approaches to preventing water seeping through the superstructure are being considered, including a canopy or a shelter. “She once had a sun canopy which she used when at sea, so we might be looking at something like that if we want to stop the water before it even reaches the timber,” said Anne.

Structural analysis is vital. *Victory* was laid down at Chatham in 1759 and launched six years later. When afloat the pressure from water was inward. Now, in dry dock in 2012, the pressure is outward. She moves and therefore deforms. “The vessel is moving in very complex ways and we need to understand

what that movement is, why she’s moving in that way and, if we need to arrest that movement, how best to do it,” said Anne. “Again, we are working with experts in the field who are mapping each individual element of *Victory* assessing its individual structural strength and also the strength of the connections to the other elements.

“In construction the shipwrights who built *Victory* would not have had the benefit of computer data to design the hull and structure, but they understood what made a ship strong. *Victory* is a system of elements and changing one or changing the way it’s connected to the others will have an effect on the overall integrity of the structure. Data is being collected from a huge range of resources including the advanced near real time movement monitoring system on board, new laser scans, surveys from experienced traditional shipwrights, historical drawings and from the repair records going back virtually to when she was dry docked, carefully hand written and annotated in the format of the time. In 1922 they understood about docking ships, but not for 100 years. We will establish how she’s moving, where she’s moving and how dangerous that might be.”

Other work continues in parallel. The ship has 26 miles of rigging and 700 blocks, with more used for the guns, ship’s boats and stores. “We need to know the state of everything, from masts to spars and yards, to make sure nothing falls down in 20 years’ time,” said Anne.

“When she was put into dry dock it was to preserve her as she was in 1805. Would you want to replace all that rigging when she wouldn’t have had all that in a dock anyway? For us it will be a cross between authenticity and something safe and maintainable. Do you need to put up miles of rigging to satisfy the one per cent of the population who will know any different? These are some of many things we have to consider.”

For Anne, an electronic systems engineer who worked for Dowty and Ultra before joining DE&S, a recent

switch of ownership from DE&S to the National Museum of the Royal Navy has helped tremendously, as has £25 million from the Gosling Foundation for Royal Navy heritage projects, matched by a similar sum from the MOD.

“This has put *Victory* under the care of people best placed to secure her future and allows funding from other areas to be gained, which was never possible when she belonged to the Royal Navy, who have to juggle today’s operational imperatives,” she said. “It has taken a little while to build a working relationship with the museum but it’s good to have the real expert curatorial and historical knowledge they bring. I have felt more confident in the technical decisions being made which are in keeping with the historical artefacts. Before, every little decision would come to me. With the new owners there is now a more strategic approach, doing what is best over the long term”

While the work continues throughout the decade, when will her top masts return? “When we are confident we can do it safely and we’ve fully understood the forces on her structure,” said Anne. “While we all want to see her restored to her glory we also have to be sure we are considering her long term sustainability as well.”

In October *Victory* became the flagship of the First Sea Lord demonstrating she is still of huge importance to the Royal Navy. She is important to Anne too. “It has been the chance of a lifetime for me. Where else would you get to look after a ship that is known the world over?” she said. “It will be a subject of future dinner conversations no matter where I go or who I meet. It is a job like no other.”

With so much effort being expended on a historic ship you have to ask yourself is it worth the money and endeavour? With *Victory* there can be no doubt that the general public, the charities, the Royal Navy and the thousands of tourists believe she is worth every penny and more.

Nuclear deterrence breaks the surface

Strategic weapon test by *HMS Vigilant* off the US coast is clear demonstration of weapon's capability



H*M*S *Vigilant* has launched an unarmed Trident missile off the Florida coast in the latest successful demonstration of the capability of the UK's nuclear deterrent.

This major test of the strategic weapon system, which took place on 23rd October, was the culmination of the Demonstration and Shakedown Operation (DASO) the *Vanguard* class submarine conducted in the United States.

The DASO provides a clear demonstration of the capability of the deterrent involving intensive pre-testing of the weapon system and training of the submarine crew that will operate Trident.

The DASO is overseen by the Chief Strategic Systems Executive, Rear Admiral Mark Beverstock, and is managed by the DE&S Strategic Weapons team. As a complex operation, with the submarine deployed to the US for almost four months, the DE&S-led team includes members from Fleet training and waterfront support, UK personnel based in the US, expertise from Clyde naval base, UK support contractors, the US Navy and US support contractors.

Rear Admiral Beverstock said: "The DASO launch is an impressive reminder of the capability of the UK's deterrent system, but also represents the culmination of two years of detailed planning. I have been most impressed not only by the hard work from within DE&S, but also the strong support from Fleet, our contractors and our colleagues in the US."

The DASO starts in the Strategic Weapons Facility Atlantic in Kings Bay, Georgia, where the submarine crew load missiles as potential launch candidates as well as a number of training missiles. These missiles are part of a mingled stockpile shared between the US Navy and the Royal Navy and have served time onboard both nations' submarines.

Having fitted the missiles with tracking, range safety equipment and dummy warheads, the submarine moves to the coast of Florida, to be closer to the range. Then begins a demanding phase of dived training, where the submarine crew is put through its paces practising how to operate the system and launch missiles even under the most extreme circumstances.

Rear Admiral Beverstock said: "Both the submarine and crew performance has been impressive throughout. As with any demanding period there were emergent challenges to overcome but these were quickly rectified by ship's staff with assistance from on-site contractors Electric Boat, Northrop Grumman, General Dynamics, Lockheed Martin and Boeing."

Having achieved a strong pass in this training, the crew and weapon system are certified and the submarine is then able to conduct a launch. This is conducted on the US Atlantic range, using shore and sea-based tracking assets.

With the missile travelling thousands of miles, most of which is in space,

safety is clearly paramount. The launch is deconflicted with other space-based activity and requires notification to mariners and aviators. These safety measures result in a relatively small window of launch. The launch window is determined months in advance, and there is little room for change.

The Rear Admiral said: "Although we can launch in severe weather the conditions were perfect. The submarine launched the missile comfortably within a split second of the window opening, impressive given that this time was picked many months ago. The entire flight was a complete success and a reminder of the impressive capability of Trident."

All UK and US Trident submarines complete a DASO after their overhauls. For a UK DASO the operation requires close co-operation between the US and UK. Accordingly, the DASO team, while UK-led, has strong membership from both countries. This is also true for US DASOs where UK personnel assist with the training and analysis – a useful opportunity to ensure UK personnel retain vital skills.

"The DASO best typifies the close

working relationship between the two countries, especially in the arena of nuclear powered and armed submarines. Both US and UK personnel have been working seamlessly together and this has been one of the smoothest executed DASOs ever," Rear Admiral Beverstock added.

The DASO is also an important milestone in the eagerly anticipated return of *HMS Vigilant* to the operational cycle. She has recently completed her overhaul in Devonport. Rear Admiral Simon Lister, Director Submarines, said: "While the DASO launch is impressive, it is but a significant way point in returning *HMS Vigilant* to the operational cycle. She has operated well during an extended foreign deployment and continues to achieve a demanding programme. This is a real testament to the hard work and dedication of the team in Devonport and the vital role that Babcock Marine played in completing the overhaul."

Vigilant remains in the US to load her missiles, but will return to the UK in time for Christmas. She then joins her sister submarines in conducting continuous deterrent patrols next year.





Rigid boats show off their flexible capability

Pictures: Andrew Linnett



'You can load this boat up to its full capacity of three and a half tonnes and it will still achieve 32 knots. This allows tremendous versatility' – Tom Bibby, DE&S Ships

Latest batch of high-speed inflatable boats is the result of increased user demand among Royal Navy crews and Royal Marines

ROYAL NAVY frigates and destroyers are to see their fleet of high-speed rigid inflatable boats boosted by another 15 vessels.

And the latest delivery has been given the personal touch by members of the team responsible for its procurement and support.

Trials of the Pacific 24, an eight-metre long fast patrol boat, built by BAE Systems in Portsmouth, are bringing the latest into service one by one.

Acceptance of the latest boat gave DE&S staff the chance to sample the immense capability of the high speed vessels with a visit to the trials and an impressive turn around Portsmouth Harbour.

“Acceptance trials are needed for all the boats and, as part of those trials, the boats are to be fully loaded to their maximum displacement to make sure all of the acceptance criteria are met,” said Tom Bibby, seaboats project manager with the Commercially Supported Shipping – Boats team.

“This time, instead of loading the boat up with ballast, we put a number of our people in. It was a good opportunity for team members to familiarise themselves with the equipment that they do a good job of supporting. And it was a very successful trial.

“We have 60 of the boats in service and we are now increasing that to 75 as, to reflect the success of the boat, demand has increased for it.”

The boats are used by Type 23 frigates and the Royal Navy’s fleet of destroyers and increasingly by the Royal Marines and Joint Force Command.

The Pacific 24 is the latest generation of craft within a range of products by BAES which has proved itself in service with the Royal Navy as well as UK police forces and overseas military.

For the MOD it serves as a military boarding boat, launched from a ship while under way to conduct counter piracy and counter narcotics operations in addition to general purpose seaboat roles such as man overboard exercises

and passenger or stores transfer. Its standard layout includes an aft control console with instrument panel and seating for six passengers. The boat can also be fitted with a general purpose machine gun.

“We are conducting trials every couple of weeks, and the boats are going straight into service,” said Mr Bibby.

“The great thing about the Pacific 24 is its flexibility. The most impressive statistic is that you can load it up to its full capacity of three and a half tonnes – which is a lot to carry, whether it’s personnel or stores – and it will still achieve 32 knots. That allows tremendous versatility.”

The contract value has increased from £7.5 million to £10 million as a result of the latest batch of boats.



DE&S heading for the water, from left: Tom Bibby, Chris MacDonald, Richard Johnson, Ben Parker, Mark Lewis and Rob Potter



Coyote suspension puts bounce into paralympic skiers

Innovation in engineering skills from DE&S and its industrial partners is looking to give the UK's disabled skiers the edge in the Winter Paralympics in two years time.

Land Equipment is involved with a small consortium of defence suppliers aiming to send skiers from the Combined Services disabled team to Sochi, Russia with high hopes of a medal.

Four companies have harnessed their engineering skills to improve the adaptive ski equipment used by the sit-ski athletes and their efforts are already contributing to international podium positions.

The British Adaptive Snowsport Equipment Innovation Council (BASE-IC) was formed in 2010 by Supacat, NP Aerospace, Selex Galileo and QinetiQ. It is supported by its President, Major General Carew Wilks, Director Land Equipment at DE&S, the ski team itself and the sports charity Disability Sport UK.

"I am delighted to recognise their efforts and introduce their contribution to adaptive sport. They are bringing engineering innovation and technology from the defence sector, providing adaptive ski equipment which is giving our disabled skiers a performance edge and a chance to be the best", said Major General Wilks.

Supacat's expertise in suspension systems for its Jackal, Coyote and SPV400 high mobility platforms has been applied to fine-tuning the suspension of the sit-ski rigs, while NP Aerospace has used its high-performance composites technology for the rapid production of the seat mouldings. NP took QinetiQ's

first generation custom seat design and, following feedback from two competitive seasons use, optimised it for performance, comfort and safety. The outrigger used by both sit skiers and three track skiers is the responsibility of Selex Galileo's young engineers, who have optimised the performance through the choice of materials, mechanical components, interfaces, operations and ergonomics.

Sit-ski athlete Mick Brennan was presented with his new system last March which included the new seat moulding. The significantly reduced weight combined with an enhanced Supacat suspension system, has allowed him to move from side to side more quickly. The seat back has also been extended to protect Mick's spine in the event of a crash. More recently, the other two principal sit-ski athletes, Pete Dunning and Kingsley Ward, have also been supplied with updated equipment.

Last month Supacat's engineers returned from four intensive days on the indoor slope in Landgraaf, Holland. Data logging, suspension set-up and tuning helped the team's three principle sit-ski athletes to understand their equipment and establish base line settings for the upcoming season. Millbrook Proving Ground in Bedfordshire loaned high performance motorsport data logging equipment for the duration.

Supacat's Head of Marketing and Communications, Jamie Clarke said: "Our work with the suspension systems has

given the athletes a real advantage and allows them to compete with confidence knowing that their equipment is set-up and performing correctly. Already this has made a significant impact on the team which is reflected in the international podium positions they have been achieving."

He added: "We now have all three sit-ski athletes racing on top of the range, custom built, suspension systems. With our motorsport data logging and analysis our engineers can fine tune each athlete's individual equipment to optimise their performance."



Mick Brennan is the skier, top, taking advantage of ideas from Coyote, top left

Spadeadam takes fast-jet crews back to the future

DE&S team helps pilots avoid surface-to-air missile systems – with some Cold War kit

Fast-jet crews can now train to avoid some of the most sophisticated surface-to-air missile systems operated by the UK's potential enemies, thanks to a DE&S team with staff hidden in the wilds of Cumbria.

RAF Spadeadam, the electronic warfare facility in nearly 10,000 acres of beautiful forest and peat bog 20 miles north east of Carlisle, sees aircrew practise evasion tactics against the threats they may face in warfare.

Now they can hone their skills against the former Soviet SA-6 missile fire control system which is still in use in much of the Middle East's air defences. The UK's two tracking units with their dish antenna have been refurbished in a three-and-a-half year project by DE&S' Air Defence and Air Traffic Systems team.

■ continued on page 30



ADATS at RAF Spadeadam: Rob Mullen (programme manager), Angie Tomlinson (supply manager) and Phil Coulthard (support manager)

■ continued from page 29

Spadeadam hosts a number of systems which are operated by nations euphemistically known as 'countries of interest'.

Operations over Afghanistan and Iraq reawakened interest in electronic warfare which had waned after the end of the Cold War. It has meant extending the out-of-service dates of Spadeadam's electronic wizardry as far as 2020. ADATS was tasked to modernise and refurbish the SA-6 systems, no small job given limited resources and a general lack of spare parts available for a piece of complex, if dated, weaponry. Work included installing digital technology where possible to bring the system into the 21st century.

VT Communications, now Babcock, won the work, and subcontracted Wojskowe Zadlady Uzbrojenia (WZU), the Polish firm which originally built the systems.

"A range of options was taken to part digitise the system which would include flat screen displays, a digital moving target indicator and some solid state components, and add instrumentation

that would enable research and development by other military branches," said Rob Mullen, support programme manager and head of ADATS' three-strong detachment at Spadeadam.

"Instrumentation would also increase the range of output parameters that are available to improve feedback on aircrew and aircraft performance. Part digitisation would also make Spadeadam's SA-6s much more representative of other countries' systems and provide as real a training experience as possible."

Mr Mullen added: "Refurbishment involved a strip of all the systems, including the track running gear, engine, gearbox and most importantly the radar system. Everything was removed, refurbished and replaced almost new. WZU hosts an amazing, if somewhat dated, facility that can manufacture everything from rubber seals to the most complex of electronic units. And we gave careful thought to spares to make sure all those we had would fit the refurbished system which would increase sustainability beyond its out-of-service date."

The first SA-6, called Alpha Mike,

completed its 18-month refurbishment in June 2010 and performed well in tests against a Falcon jet a few months later.

Technological advances meant more improvements could be made to the systems to make them more capable and versatile. These were included when the second SA-6, called Tango, was handed to Babcock in November 2010. In the meantime ADATS secured a real coup by procuring a sustainable stock of spares for both systems.

Tango was back at Spadeadam last spring where a Falcon pilot struggled to break the radar's lock-on during acceptance testing.

Since then Alpha Mike has begun an update at an extra £113,000 to bring it alongside Tango which will be finished by the end of this year.

"RAF Spadeadam now boasts two SA-6 systems that are completely representative of those operated by countries of interest," said Mr Mullen. "Despite the added functionality on Tango, the project was delivered on time and on budget and, considering current financial constraints, technical complexity and sheer age of these systems, this is a real success for ADATS, its detachment at Spadeadam and the contractor, Babcock."

So successful was the delivered product that a new project is now well underway to refurbish Spadeadam's two SA-8 systems to the same high standard.

"If you think it a challenge to support





Fast jet pilots will sharpen their skills against various electronic threats at RAF Spadeadam, thanks to the work of DE&S and partners, below, Rick Parkin (Babcock customer services manager), Flt Lt Chris Bewley, Steve Fysh (Babcock area manager), Rob Mullen, Phil Coulthard and Angie Tomlinson

one's own complex electronic warfare equipment, consider for a moment the added challenge it is to support 40-plus-year-old equipment formerly operated by your adversaries", said Chris Carpenter, Head of DE&S' ISTAR delivery. "The ADATS achievements on the SA-6 are therefore all the more remarkable sustaining a hugely valuable and more capable asset to the UK and Nato electronic warfare threat capability."



SPADEADAM facts:

Spadeadam is used by aircraft from the RAF, Army, Royal Navy and Nato forces to practise manoeuvres against threats they may face in contemporary warfare.

Survival of aircrews over Afghanistan, Libya or elsewhere, and the soldiers on the ground who depend on air support, is affected by the training provided by RAF Spadeadam.

ADATS-supported equipment provides Radio Frequency (RF), Ultra Violet (UV) and Infra Red (IR) threat signals to aircraft and captures information that either shows, or enables judgements to be made about, the likely outcome of crews and aircrafts' ability to defeat these systems.

Systems available include Russian SA-6, SA-7, SA-8 and ZSU 23-4 as well as complex SA-2 and SA-3 Emulators developed by the US.

ADATS is based at RAF Henlow under Group Captain Richard James. The Spadeadam detachment comprises Rob Mullen as the support programme manager and engineering authority, Phil Coulthard as the support manager and Angie Tomlinson as the dedicated supply and inventory manager.

The detachment is responsible for delivering and sustaining threat capabilities to support the Spadeadam training facility against very high availability targets. In relative isolation, the detachment manages a £2 million-plus annual support budget, more than 20 contracts for fourth line support, safety and environmental case management and sourcing ageing Soviet spares and obsolete consumables that were cutting edge more than a generation ago.

Refurbishment and part digitisation of two SA-8 (short range Russian missile systems) is at the invitation to tender stage. Procurement strategy will follow that of the SA-6s and delivery of the first refurbished system is expected in 2015.

A complete re-write of safety cases and environmental impact studies is currently underway for all 13 equipment types operated at RAF Spadeadam. Delivery of the completed documents is programmed for next August.

Spadeadam has an American T1 system that emulates the SA-2 and SA-3 systems (long range missiles). Work on the system's central computer was completed in August with testing in September. The SA-2 and SA-3 are highly favoured as a real tactical training challenge among Nato aircrews.



May the Future Force be with you

Budgetary discipline, interoperability and partnerships will be the supporting foundations of the transformation to Future Force 2020, says Defence Secretary Philip Hammond.



The Defence equipment programme needs to be balanced and sustainable if the Armed Forces are to have the confidence that the capabilities promised will actually be delivered, on time and to requirement.

By maintaining discipline, sensibly managing in-year budgets, and tightening our long-term projections, we can begin to release the contingencies that we have built into the budget, to support further investments in capability, confident that there is a sustainable funding stream to deliver them.

Since the beginning of this financial year, the new discipline in our budgetary regime has allowed us to give the go-ahead for a series of equipment projects over and above the committed equipment programme.

In the air environment for instance this includes targeting pods for fast jets, better protection systems for Tornado GR4, and enhancements to Merlin helicopters. The powerful, adaptable RAF of Future Force 2020 is taking shape.

The re-formation of 13 Squadron at RAF Waddington will double the RAF Predator capability in the skies over Afghanistan, flying these remotely piloted air systems from ground stations in the UK for the first time.

And I was proud earlier this year to be in Fort Worth to take delivery of the UK's first F-35 Lightning II.

Lightning II is one of the clearest examples of Britain's determination to stay in the top rank of military powers. The Joint Strike Fighter project was conceived as a multi-national programme.

The UK's tier one status in the programme speaks eloquently of the UK's close partnership with the United States.

The relationship with the US is the UK's most important, but by no means only, relationship upon which we rely to deliver our national security.

The Libya operation saw 260 aircraft from 16 countries flying 26,500 sorties.

The level and sophistication of the integration between coalition partners, forged in campaigns such as Afghanistan

Mr Hammond was speaking at the Royal United Services Institute Air Power Conference, Westminster on 1st November



The F-35 Lightning II, a clear example of Britain's determination to stay in the top rank of military powers

and Libya, needs to be maintained and then taken forward long after those campaigns are behind us.

This is all part of putting into practice the kind of interoperability we will need in future.

Because there is another strategic lesson we can draw from recent operations, particularly Libya.

While on the one hand Libya showed the strength of our Nato alliances and our partnerships, the operation also, to be frank, cruelly exposed the imbalances and weaknesses in Nato and thus the scale of the task facing European Nato nations.

The bottom line is that Europe, as a whole, needs to do more at a time when the reality is that, across the continent, aggregate defence expenditure is certain to fall in the short term and, at best, recover slowly in the medium term.

So the challenge is stark: if we can't spend more, we must do things differently. It encompasses those who supply and support our equipment too.

Success will require a genuinely transparent collaboration in aerospace,

between industry and government to keep overheads down, to maintain essential R&D, and to build healthy export order books while making sure the unit cost is affordable.

So we are embarking on some major changes to make the MOD a more capable and intelligent customer:

- restructuring equipment acquisition and through-life support;
- bringing in private sector management skills through a partnership to re-inforce the military and civilian specialists who form the backbone of the defence equipment and procurement organisation;
- we are also looking at how the acquisition processes can take better account of the commercial landscape – building in exportability – making sure the wider package on offer to potential customers is as attractive as it can be.

Those years of over-programming in defence created a climate of uncertainty that was beneficial neither to our Armed Forces, nor to industry, with neither side able to plan properly.

To provide industry with as much information as possible to plan, we will be publishing a summary of the equipment plan in the coming months.

This will provide greater granularity than ever before about how money will be spent across the breadth of capabilities by breaking down spending for equipment and support alongside the judgment of the National Audit Office on the robustness of the plan.

But there is also an onus on our suppliers to provide better value for money for the taxpayer.

We need our partners to be lean and flexible, capable of operating in a more competitive defence marketplace, responsive to the needs of Government.

Industry support for air operations in Libya last year shows what can be achieved. The 'Total Support Force' concept seeks to integrate more fully the contribution of the private sector to operations. Industry, the Armed Forces and MOD civilians working more closely than ever to achieve their mutual goals. This is the way of the future.'



Desider Industry Focus 2013

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

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

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

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



Readership profile

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

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

Readers span all levels and functions

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

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Ellamy effort 'biggest highlight'

DE&S teams worked flat out to meet the needs of the RAF, says departing Air Support Director

DIRECTOR AIR Support (DAS) Tim Rowntree, who leaves early next year on a three-year appointment to lead European procurement organisation OCCAR, says he will look back on his work in DE&S with enormous pride and satisfaction.

"The Director Air Support job, for me, has been the best job in the world," he said. "Apart from my love of all things aviation, it has been the privilege of leading an amazing team of people, and being part of such a terrific wider team across DE&S and defence that has made it so.

"My five years as DAS have been a time of generational change in the way we do things in the MOD and in the aircraft and systems my team is procuring and supporting.

"Aircraft that have served the UK and the RAF for decades are being replaced with new world-leading equipment. In place of the VC10 and TriStar we are now bringing into service the modern and highly capable Voyager," he said.

"In place of the long-serving



Tim Rowntree on the flight deck of Atlas, the A400M transport aircraft

but effective Hercules we have already received the C-17 and we will soon have the A400M. France should receive the first production aircraft next year and a huge amount of testing has been done to iron out the initial teething problems. It is the 21st century airlifter our forces need and deserve and it will be backed by a world-class support solution that will keep it operating around the globe.

"The now-retired Nimrod R1 is being replaced by the Airseeker, which we are procuring from the US and on which RAF crews are already flying by agreement with our USAF colleagues."

Mr Rowntree said two

RJ100 transports would be delivered to the RAF for use from next year to further ease pressure on tactical airlift and passenger air transport fleets.

On other programmes, the Sentinel had been a huge success and had achieved high rates of availability on Operation Ellamy.

Mr Rowntree was also full of praise for industry's co-operation in dealing with challenges ranging from tackling the emergent problems on A400M and the recovery of performance on ageing fleets, to the speedy run-down of the Nimrod MRA4 programme under difficult circumstances.

"Apart from the recovery and re-baselining of the vitally important A400M programme, I think the biggest single highlight of my time as DAS was Operation Ellamy. To me, building a strong team is like putting fuel in the tank, and the extra power was certainly there when we needed it for Ellamy.

"Alongside Sentinel's achievements, the VC10 achieved twice its planned flying hours carrying out air-to-air-refuelling duties while the Hercules fleet was worked hard and we even pulled the Nimrod R1 out of retirement and back into service," he said.

On the personnel side Mr Rowntree oversaw the collocation of former DLO and DPA teams at Abbey Wood to form one coherent through-life capability team.

He has also managed considerable personnel reductions, bringing DAS strength down from about 1,300 to around 850 now.

For the future, the man who started his career in MOD as a craft apprentice is expecting to continue to maintain close links with DE&S through his work as leader of OCCAR. The post required competence in at least two European languages, and his interview was conducted in English and German.

"I'm hugely excited about the job. My mission will be to prove that OCCAR can procure and support equipment more effectively and at a lower cost than can be done nationally."



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Partnerships with industry

TRUST IN and partnership with industry will help deliver the MOD's Total Support Force (TSF) concept, one of eight components of the Whole Forces Concept.

TSF provides a fully integrated and sustainable military (Regular and Reserve), Civil Service and contractor support force.

But to meet the requirements of TSF the MOD will need to change culture and behaviours to develop more mature approaches to getting value for money, developing trust with industry, encouraging partnering at an early stage and a willingness to agree trade-offs

These were just some of a number of messages to emerge



Logistics Masterclass calls for mutual trust to underpin sustainable support

from a Defence Logistics Masterclass hosted by Cranfield University's Centre for Defence Acquisition at the Defence Academy, Shrivenham, on 23rd October.

Jointly supported by the Chartered Institute of Logistics and Transport, and Supreme Group UK, the logistics masterclass featured key speakers, among them Maj Gen Ian Copeland (pictured left), Director Joint Support Chain, and retired Major General Jeff Mason, now managing director of Supreme Group UK.

Other messages emerging included the need to develop

better appreciation of the cost to industry of the conventional bidding process, looking to break away from the 'lowest compliant bid' culture.

A partnering rather than transactional approach would address the difficulties industry has in pricing deliverables when the 'what, where and when' are unknown.

Emerging themes included the need to develop people with the skills to operate in the transformed environment, something being addressed by The Materiel Strategy.

The next Masterclass will be next month.

Working in collaboration earns its just rewards

THE FIRST two MOD teams recognised for their standard of collaborative business relationships attended a short ceremony at the House of Lords.

Lord David Evans, chairman of the Institute of Collaborative Working, congratulated the MOD teams and Boeing UK – one of the teams is a joint team with industry – on their achievement and expressed his pleasure that the MOD was becoming increasingly enthusiastic about collaborative working and the BS 11000 standard.

Certificates were presented to

- Brian Dubrie, Head of Defence Information Service Team (DIST), for its collaborative work with the Atlas consortium to provide computing infrastructure and services for sharing information and collaborative working across defence;
- Air Commodore Barrie Thomson, Head of Logistic Network Enabled Capability (LogNEC), for his team's work with Boeing to rationalise logistic applications across warehousing and distribution;
- Jeff Peté, chief executive of Boeing UK.

Afterwards British Standards Institution (BSI) referred to the growing interest in BS 11000, particularly from the US Department of Defense.



Above, from left: Russ Buck and Jeff Peté of Boeing UK, Mike Charlton, Head of PFI/PSG at the MOD, Stuart Vall and Air Commodore Barrie Thomson of Log NEC, Mark Basham of BSI



Right: Brian Dubrie, Head of DIST, receives the award from Mark Basham of BSI

Seminar looks at future support – on land, on sea and in the air

A JOINT MOD/UK Council for Electronic Business Support Chain Seminar has examined future support services across land, sea and air.

Brig Mark Dunn, MOD Head of Support Chain Management, outlined the need for: partnering and collaboration, clear articulation of requirements, certainty of delivery and availability levels balanced against value for money.

Discussion reflected a growth in stature for the Defence Support Chain as more contracts demand the provision of through-life support on equipment.

Delegates shared the belief that successful partnering needs appropriate incentivisation to ensure continuing innovation and an enduring productive relationship.

Col Mark Snape outlined the Land Equipment Support Vision, highlighting the advent of a new operating model taking effect from April 2013.

In the marine environment, the Alliance model is relatively mature. The Surface Ship Support Alliance (SSSA) for warship support is enabled through aligned objectives, close governance and a combination of

enterprise-level performance management and incentivisation.

In the SSSA, industry provides the lead in joint teams that have a mandate to identify and drive change.

In the air environment, a key component in successful contracting for aircraft availability are contracts that facilitate a performance culture. Other air-related topics included updates on UK military air safety regulation.

Presentations from this MOD/UKCeB Support Chain seminar are available on the UKCeB website – www.ukceb.org



Why managing information is a vital process

Group Captain Stu Jack takes the floor during a session of the autumn conference at Abbey Wood

DES' CHIEF Information Officer hosted the autumn Information Professionals' Conference at Abbey Wood on 30th October.

Presenters addressing the conference came from a variety of backgrounds, offering valuable insights into how information management is approached in their areas.

The mix emphasised how information management is recognised as key to the way other Government departments and industry partners function, where investment is made in both the information profession and practices.

Kerry Graham of Government Communications Headquarters, Cheltenham spoke about their approach to knowledge and information management and developing professional career paths.

David Lynam of the Atomic Weapons Establishment at Aldermaston spoke about setting up a Chief Information Office in a Government Owned Contractor Operated (GOCO) body and the move towards business activities focussing more on production output.

Barry Austin of DE&S' Logistic Network Enabled Capability was joined by Nick Whyte of Boeing Defence UK to discuss how their teams have successfully collaborated on the Future Logistic Information Services contract.

The conference is a bi-annual event; the spring conference will be in May.

Euro defence on agenda at Portsmouth

SENIOR STAFF from European navies descended on Portsmouth naval base for a key conference debating the continent's defence issues.

Twelve representatives from Europe's Channel Command – known as Chancom – attended their annual forum which is hosted by a different partner nation each year.

The group comprises five nations which border the channel – the UK, France, Germany, Belgium and Netherlands. Senior naval staff from 'observer' nations of Spain, Italy and Portugal also attended.

Communications was a key theme debated at the conference, including the importance of strategic messaging and a common narrative.

Naval base Commander, Commodore Jeremy Rigby, said: "We were delighted to host such a high-profile event. With so many heads of European navies present it was an excellent opportunity to promote the importance and growth of the base and Portsmouth as a whole."

The conference was preceded by a dinner on board *HMS Victory* hosted by First Sea Lord Admiral Sir Mark Stanhope who chaired the conference.

First award is a boost for new training package

ENGINEERING SUPPORT experts Allan Webb are partnering DE&S in supplying training courses to back a Military Packager Accreditation Scheme (MPAS) – and the first certificate has been awarded.

The company has been transferring packaging data into on-line technical documents for all three services. And a training suite is now developing industry's packaging skills from practitioner to expert, the latter being an exam-based assessment for MPAS certification.

"Any company looking to supply military level packaged products to the MOD must ensure their packaging complies with the new MPAS scheme," said Steve Rigsby, managing director of Allan Webb. "We're thrilled to have been chosen to deliver this new accreditation process."

Nathan Kennedy, operations director of John Pipe International, an established military packaging design and manufacture company, has achieved the first certification as a MPAS military packaging designer.

"The exam pieces were challenging, which is how it should be, as the standard needs to be very high," he said.

"Gaining the new MPAS qualification will ensure that we can continue to provide up-to-date



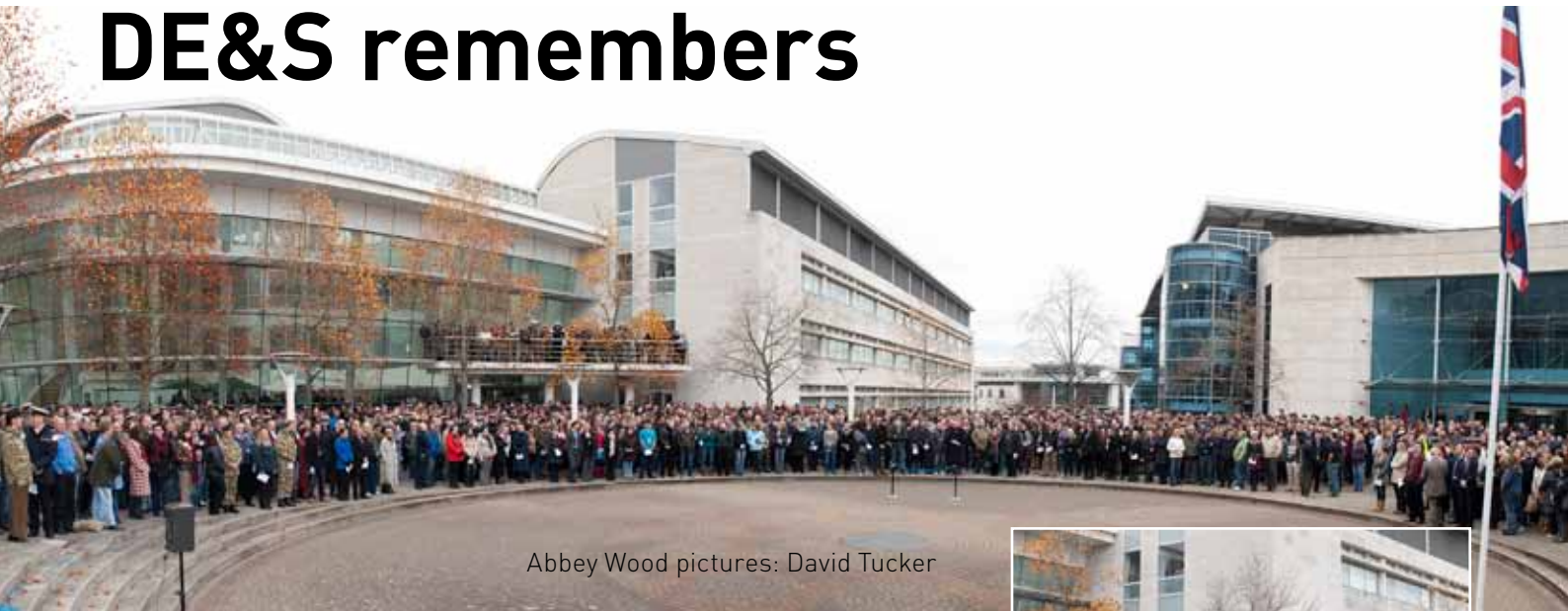
Dan Smith of DE&S presents Nathan Kennedy with the first MPAS certificate

advice and services for defence packing to our customers."

Nathan's managing director, David Pipe, added: "As part of our commitment to MOD packaging, we felt that we should support the new standard. Front line forces need to be able to rely on material packaged to suitable standards."

DE&S' point of contact is Anthony Hill at Abbey Wood 030679 37659, while more information is available at www.allanwebb.co.uk/mpas

DE&S remembers



Abbey Wood pictures: David Tucker

ABBEY WOOD briefly came to a standstill on Friday 9th November as hundreds of staff observed the traditional silence in memory of UK service personnel who have fallen in combat around the globe.

DE&S' ceremony of remembrance took place in the central piazza where many stood in silent prayer in what is an annual event for headquarters staff.

Chief of Defence Materiel Bernard Gray led the party of senior DE&S officials in laying a wreath in the centre of the piazza. Further wreaths were laid by senior officers of the three services represented in DE&S and also by the trades unions representing civilian staff.

A bugler on a balcony overlooking the ceremony played *Last Post* before staff and military personnel observed a period of silence. Silence concluded with *Reveille*.

Around 500 staff at Corsham observed the two-minute silence on 9th November in a service led by Rev William Rogers, a Salisbury Diocese priest working as a consultant in the Defence Information Service Team. Colonel Gordon Rafferty, Chief of Staff, read from Saint Matthew's gospel.

The Royal Navy and Royal Marines joined the other services and civilian personnel in the annual Remembrance Day service on Sunday 11th November on Plymouth Hoe.

Rear Admiral Clive Johnstone from the Devonport-based Flag Officer Sea Training organisation laid a wreath on behalf of the Forces.

Military and civilian staff pause in memory of the fallen



Above: Chief of Defence Materiel Bernard Gray, above centre, leads the wreath-laying at Abbey Wood



Left: staff attend a ceremony at Corsham where Col Gordon Rafferty read from St Matthew's Gospel, far left.



Middle left: Commander Philip Nash, commanding officer of Type 45 destroyer *Defender*, lays a wreath into the sea during the ship's sea trials

Below: Naval Base Commander Clyde, Commodore Mike Wareham, lays a wreath at the Helensburgh cenotaph

Bottom: Plymouth Hoe comes to a stand on Remembrance Sunday



Kevin comes up with a gem of an idea

IRONING OUT a flaw in a new software system has earned a DE&S Army major an award for his innovation.

Major Kevin Dodgson of Defence Fuel and Food Services won a GEMS award for the best suggestion for improving business.

The Phoenix team is responsible for the MOD's vehicle fleet contract which was taken on by Babcock last April.

New software was introduced so staff could book cars.

Major Dodgson was one of the early users and saw a problem in the software as there was a difference in cost between using a military and civilian address for the same pick up and drop off location. If using the civilian address for Abbey Wood there was a different delivery charge.

Major Dodgson flagged up the problem, and the software was modified. Savings at Abbey Wood are expected to be significant.

He received his award at the GEMS presentation ceremony in Main Building on 20th November.

GEMS, the Defence Ideas Scheme, has relaunched this year with a new online system that makes submitting suggestions and tracking progress from evaluation to outcome easier.

All civilian and service personnel, including ex-employees, can make suggestions for improving efficiency and organisation in the MOD.

Those who submit suggestions which are implemented may receive a financial reward, where it can be demonstrated there is improvement to the organisation, management or delivery of services by the MOD or Armed Forces.

About 40 per cent of the suggestions that GEMS receives are implemented. This saves the MOD about £12 million each year in auditable savings. The intangible benefits are

Software glitch is ironed out to save Abbey Wood cash

estimated to be much higher at about £200 million each year.

Scheme manager Stuart Laws said: "The key purpose of GEMS is to make your life better; we all spend most of our lives in the office or other workspace. There is no reason why you should have to come in and deal with the same problem every day. If you can see ways of making that problem go away then let's make that change and make our lives easier."

More than 2,000 suggestions a year are submitted to the scheme.

Categories are:

- Most Environmentally Friendly
- Most Safety Improving
- Most Innovative
- Most Operational Benefit
- Most Business Improving
- Best Example of Modernisation
- Evaluator of the Year
- Award Group of the Year

GEMS is seen as the 'best in class' ideas scheme in the private and public sectors.

GEMS in figures

In financial year 2011/12 the GEMS scheme paid out:

■ 152 Encouragement Awards totalling £4,250.83

■ 137 Benefit Based Awards totalling £44,885.87

■ 31 Saving Based Awards totalling £27,156.51

In the same period GEMS suggestions generated estimated savings of £18 million



Above: Major Dodgson is presented with his award by team leader Group Captain Andy Killey, left

Left: Air Chief Marshal Sir Stephen Dalton, Chief of the Air Staff, front centre, is joined by the MOD's GEMS winners at Main Building on 20th November. Major Dodgson is on the extreme left of the back row



GEMS Online can be found at <https://gemsonline.mod.uk>

Corsham puts on a double celebration



Vice Admiral Philip Jones, left, cuts a cake at Corsham

Pictures: Tony Tanner

Pedal power to Culdrose

THE GUEST of honour at Corsham's Trafalgar Night found himself 'hijacked' into a double celebration to commemorate the birthday of the Royal Marines.

Vice Admiral Philip Jones was the special guest of Corsham's officers' mess for the 21st October celebration of Nelson's victory over the French and Spanish.

With the Royal Marines birthday – 28th October 1664 – to be celebrated a few days later, Lt Mark Harrison invited the admiral to cut the cake.

Marine

Warrant Officer Dai Bainbridge recited from memory the convening order, then luckily had a spare Fairbairn-Sykes Commando dagger to make the first incision.

On the day of the celebration military and civilian staff from Spur A1 at Corsham devoured a chocolate cake, a tradition observed annually and organised by Lt Harrison.

Saddling up helps team pave the way for updated helicopter arrivals



Saddling up: the team takes on the challenge of the cycle to Culdrose

A TEAM of 13 Merlin support staff from DE&S, AgustaWestland, Lockheed Martin, Selex Galileo and Deloitte has paved the way for the impending delivery of the updated Merlin Mk 2 helicopter.

The team cycled the 200 miles, between the AgustaWestland factory in Yeovil where the aircraft are currently being updated and the Royal Navy's Merlin main operating base at RNAS Culdrose, over the course of a weekend.

The team took a scenic route avoiding main roads and taking advantage of national cycle routes wherever possible.

The ride catered for all abilities with relay options

for those not wanting to cycle the full distance.

"This was a fantastic way to mark the impending delivery of this amazing new aircraft with our industry colleagues, to get fit and to show that the whole Merlin team is focused on this key delivery," said Captain Andy Lison, Merlin team leader.

"Some of the team were sponsored by friends and family and we hope to raise £3,000 for the treatment of Cancer and



Leukaemia in Children."

The first two Merlin Mk 2 aircraft are on schedule to be delivered to the Royal Navy before the end of the year. The maritime patrol aircraft, incorporating updated avionics and mission systems, will provide world class capability well into the future.

Peter's powerplay performance brings his year to a perfect end

ABBEY WOOD multi-sport athlete Peter Wheddon polished off a successful 2012 by becoming world champion in the 55-59 age group at the International Triathlon Union's World Duathlon Championships in Nancy, France.

This was the pinnacle of his season after winning gold at both the National Duathlon and Triathlon Championships and the Long Distance Duathlon European Championships earlier in the year.

The first run in Nancy was 10.5 km of a flat route, followed by a 37.5km bike leg was on a five lap closed-road route that included testing technical sections, and some fast sweeping sections.

The second run was two laps on the same route as the first.

Trailing by 32 seconds at the first transition Wheddon managed a super-fast change to leapfrog into the lead at the bike mount.

He used his bike strength to slowly gain a few seconds on each of the first three laps and was more than a minute ahead embarking on the final run.

Wheddon held his form to the end and sprinted up the finishing straight to cross the line with a 53-second lead.

"That was a fantastic battle throughout the whole race," he said. "At the out and back sections of the course I noticed that I was pulling away a little but I could see that the destination of all three medals was going to come down to how we all performed on the second run. Traditionally, that is my weakness but on this occasion I kept up a good solid pace throughout and actually set the third fastest split in my group."

"My form had not been that good in recent races and tests over the last few weeks and I did not feel great on the days leading up to the event. But I just started to feel better the evening before and my confidence grew in the hours before the start.

"I would love to defend my title in Ottawa next year if family commitments permit. But with the World Triathlon Championships being in London in 2013 I have a glimmer of a thought about qualifying for that."



Just champion: Peter, centre, is congratulated by his north American rivals

DINs - released this month

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

2012DIN04-141: This is for all users of long haul/beyond line of sight communications and concentrates on the Skynet 5 Exclusive Market Definition and the actions required to introduce new communications requirements into service.

2012DIN04-142: The on-line interim New Clothing Solution service will cease at the end of this month. The last date for orders is 16th December. From 1st January designated personnel will be able to use an e-ordering service operated by DE&S' Defence Clothing.

2012DIN04-144: The Lightweight Field Generator equipment management is being handed over from the Deployable Infrastructure team to Powerfield, a derivative of Rolls-Royce Distribution and Generator Systems. The equipment will now be managed under a contractor logistics arrangement. The company will take responsibility for support, including the loan pool, task issues and technical support.

2012DIN04-145: This DIN highlights the two in-service Nato picatinny converter rails and details their compatibility with SA80 main body configurations.

Further information and more details on the latest DINs see:

<http://defenceintranet.diweb.r.mil.uk/DefenceIntranet/Library/CivilianAndJointService/AtoZ/DinsIndex2012.htm>

Steve reaches his peak

That's a million steps for charity

STEVE MOULE put his best foot forward – and found himself walking further than anyone else in the MOD.

Steve of the Defence Information Service Team's (DIST) Secretariat at Corsham joined more than 1,000 civil servants recording their steps throughout late September and October as part of the civil service charity's 'virtual walking' challenge.

The main objective was for participants to become more active, get walking and have some fun along the way.

Steve, who likes mountain climbing, managed more than 1.1 million recorded steps to come out on top, hardly surprising since his walking included a trek up Mount Snowdon, pictured right.

"There is something of Forrest Gump in me and I just kept on walking," he said.

"The walk was all about raising money for civil servants who have fallen on harder times. DIST was one of the big fund raisers; we raised roughly £900."

In the virtual walking world of the contest – run by the Charity for Civil Servants – he walked 517 miles, the equivalent of taking him from the imaginary start line of the contest at the Cabinet Office to Augsburg in Germany before the chequered flag fell to end the contest.



Benson puts the drive into MOD road safety

PERSONNEL AT RAF Benson have come out winners of this year's Defence Road Safety award.

The Oxfordshire helicopter base pipped RAF Leeming for the award, which aims to promote road safety among the service community.

The MOD has sponsored an award since 1998, which is presented to the unit, garrison or station which, in the view of the judging panel – road transport experts from DE&S and each Front Line Command – has made the most effective contribution and commitment to improving road safety, by promoting safe driving standards and initiating effective road safety projects.

The award is a silver rose bowl, with a crystal bowl for the runners-up.

This year's award was presented by Major General Ian Copeland, Director Joint Support Chain, who commended both the winners and runners-up for their commitment and dedication to improving road safety.

With an average of 34 MOD employees being killed in road accidents each year and many more injured, the cost to defence in personnel and financial terms is significant.

The number of initiatives being employed by the various units and the enthusiasm of road safety officers across all the services meant that the standard of the competition this year was high.

RAF Benson's Station Commander, Gp Capt Richard Mason, said: "I regard road safety as one of the key elements

of force protection, both at home and on deployed operations. I am therefore extremely proud of RAF Benson's Road Safety Committee in being named as the winners of the award."

Mike Moate, SO2 Defence Road Safety, added: "This year was particularly noteworthy for the extremely high standard of submission. The level of fatal accidents has reduced over the last three years and these winners represent a fine example of units taking a proactive stance in assisting to further reduce these figures."

Land Rover donated an 'experience day' for both the winners and runners-up, which will include a tour of their Solihull factory and demonstration drives.

Engineers continue commitment to the future

TEN DE&S engineering mentors supported the launch of year six of Go4SET in Keynsham.

Go4SET is a work-related learning scheme for 12-14 year old pupils, aimed at raising awareness of future career opportunities in science, technology, engineering and maths.

Teams of six pupils from schools in Bath and Bristol get a taste of real life science in a ten-week programme working with their DE&S mentors.

The mentors help pupils with their projects and give them the opportunity

to see how issues are tackled in real life. The scheme also brings schools together to share ideas.

Mentor Rachel Haywood-Evans said: "Mentoring for Go4Set offers a great opportunity to work with engineers of our future trying to enhance their enthusiasm and helping them to understand the varied and interesting work that can be undertaken as an Engineer.

"As a chartered engineer it is great to see the interest and enthusiasm that the young people have, and it's great to

be able to offer my skills to support the school in their development.

"Schemes such as Go4Set and Primary Engineer offer a great opportunity to use some of the engineering skills that you do not necessarily use day to day in the MOD and to pass on your experiences to the young people – and the main thing is to have some fun while doing it"

Go4SET is a development opportunity for DE&S technical staff. More information from Rachel Dyer on 9679 36769.

TWO GRADUATES from DE&S' Trainee Accountant Development Scheme have proved they are top of the class having gained exceptional results in professional tests against a worldwide field.

Saeed Iqbal of Director Finance achieved an outstanding second place out of 4,014 candidates in a tough test of professional competence in management accounting, run by the Chartered Institute of Management Accountants (CIMA).

Camilla Gibbs of Director Weapons was equally impressive, finishing fourth in the tests which are a major stage towards becoming a chartered management accountant.

To be among the top ten in the world is regarded by CIMA as a considerable achievement and reflects well on DE&S.

The exam is based on case studies set in a simulated business context of one or more fictional organisations with case material based on real business or industry.

It demands application of strategic management accounting techniques to analyse, recommend and support decisions.

Saeed and Camilla had to use a variety of their skills to arrive at a recommended solution.

The emphasis was on assessing the students' competence in applying their knowledge to show a high level of analysis and evaluation and skill in presenting and communication information.

Graduate duo prove they are top of the class



Camilla Gibbs and Saeed Iqbal, both based at Abbey Wood, finished fourth and second in the latest round of worldwide competence tests for the Chartered Institute of Management Accountants

LATEST DSRA LOTTERY WINNERS September

- £10,000:** Christina Fowler (Arbroath).
- £5,000:** Amanda Partridge (RAF Wyton).
- £2,000:** Howard Miller (Cheadle Hulme).
- £1,000:** Andrew Somerville (Abbey Wood). **£500:** Beryl Nelson (RAF Shawbury).
- £300:** Michael Brown (RAF Mildenhall), Charalambos Gregory (Imphal Bks), Stefania Greenway (Blandford), Shirley Dixon (Aldershot).
- £200:** Shirley Matthews (Upavon), David Batty (Yeovilton), Linda McColl (Hereford), Zena Willdig (Yeovilton), Thomas Ryder (New Delhi), Anne Holloway (Abbey Wood), Martin White (Whitehall), Philip Clark (Devonport), Colin England (Shrewsbury), Stephen Burnside (Coulport), Robert Smith (Portsmouth).
- £100:** Paul Stevens (Southampton), Susan Boys (Beverley), John McArdle (Beith), Francis McGlade (Kingston Park), Jonathan Davis (Whitehall), Simon Abrahams (Abbey Wood), Coral Sharman (Fareham), Ronald Harney (Wethersfield), Timothy Morris (Devonport), Rose O'Neill (Bangor), Stephen McDonnell (Chilwell), Mark Evans (Corsham), David Pinkerton (Belfast), Lynn Natividad (Warrington), Ailsa Beetlestone (Cosford).

Debut victory earns Carew a British Forces rally recall

DE&S' DIRECTOR of Land Equipment proved himself a dab hand in a Land Rover with victory on his debut for the Armed Forces Rally Team.

Major-General Carew Wilks joined the team's director Major Alan Paramore of DE&S' Protected Mobility team for the Tempest Rally in the Aldershot area last month following an invitation to join the team during a Festival of Army Motorsport meeting earlier in the year.

And the pair earned a comfortable victory, despite suffering a broken hydraulic line and a major loss

of fluid which required hurried repairs. The major-general has been invited back for a multi-day full British Rally Championship event next year.

Earlier Major Paramore piloted his Land Rover to first place in his section of the Trackrod Rally in Yorkshire.

Major Paramore took an early class lead in the first 15-mile Friday stage at Dalby. It was a lead he held to the finish, including victory on the final stage through Langdale Forest where speeds reached almost 100mph.

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