

DESIDER

AN INSIDE LOOK AT DEFENCE EQUIPMENT & SUPPORT



**PROTECTING OUR NATION, OUR TERRITORIES AND OUR ALLIES
TODAY, TOMORROW, TOGETHER**



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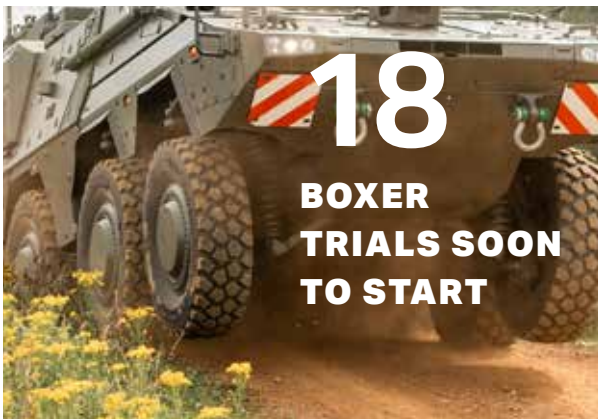
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START

Talking

Over the last few months, there has been a great deal of focus on the future of UK defence procurement.

We've seen the publication of Clive Sheldon KC's review of the Ajax armoured cavalry programme, the House of Commons Defence Sub-Committee's report in to DE&S, the MOD's refreshed Defence Command Paper and NATO's new Defence Production Action Plan. All of which are set against the backdrop of Ukraine's long-awaited summer counter-offensive, supported by one of the largest movements of munitions Europe has ever seen.

At first glance, these may feel like a broad group. Yet, scratch the surface and underneath each one contains within it the same call for greater collaboration and trust; between the armed forces and DE&S; across the defence enterprise; and with our allies around the world. I'm pleased to see this, as it all closely aligns with our own strategic direction.

This edition of Desider explores the many ways in which we can cooperate more closely and integrate more fully

with our partners and colleagues, and the good things that happen when we do. It's crucial that all those with a stake in our nation's defence and prosperity are aligned in our strategies and intentions. In a world where the threats are fast evolving, this is the only way we can be sure to out-pace and overcome our adversaries.

We need look no further than Ukraine to see the mighty impact we can have when we come together for a common cause. But the events of the last 19 months, and the challenges they have highlighted, have also been a catalyst for us to examine more closely how we maintain the UK's industrial defence capacity, and how we can better support our armed forces and alliances.

The Defence Command Paper refresh, published in July, outlines some of the steps we have to take to sharpen the defence enterprise, in response to increasing levels of global threat, and to grow the nation's prosperity. In

this more dangerous world, the paper sets out what we must do to increase the availability of current defence equipment and to upgrade it with greater speed. It sets out the need to shorten acquisition time-frames, both before and after contract award, and to prioritise time and affordability above absolute performance. Learning the lessons from Ukraine, it identifies the critical role of industry in our defence enterprise, and commits to increased engagement and the need to ensure financial institutions in the UK recognise the defence industry as a vital public good. More on this later in Desider.

I recently had the opportunity to discuss the Defence Command Paper refresh with my Defence Suppliers Forum (DSF) Executive Group co-chair John Howie and the rest of the Executive. DSF is an essential space, where organisations within the MOD can meet, discuss and deepen partnerships with our industry partners. As John puts it in his excellent column later in this edition, it's the "main collaboration space between the MOD and the defence industry, where we can come together for the greater good of the whole enterprise."

The Command Paper was published only days after the House of Commons Defence Sub-Committee's report into DE&S. I was pleased to see the report showed the Sub-Committee's appreciation for DE&S' work supporting Ukraine and, while it was not without criticism, it recognised that change was required throughout the acquisition system. We will formally respond to their observations and recommendations during the next

parliament, but it was reassuring that the majority of recommendations in the report reflect actions we are already taking as part of our strategy implementation or are reflected in the Command Paper.

Looking more broadly, and with my National Armaments Director hat on, our drive for greater international defence collaboration was approved at the NATO Summit in Lithuania in July. As we explain later in this edition, NATO has agreed a Defence Industrial Action Plan, which intends to guide defence industrial strategy across all 30 allied nations. It calls for more alignment between nations and a hardwiring of interoperability across all of our capabilities. The national armament directors, myself included, played a crucial role in shaping the Action Plan, and I'm very pleased with how it has developed and the enthusiasm with which it was adopted. If you are interested in this, later in this edition we look at the Defence Industrial Action Plan in more detail.

I'd like to end by looking forward to the upcoming DSEI 2023, one of the year's most important defence events. DSEI brings together governments, armed forces, industry thought-leaders, and the entire defence and security supply chain for a week of networking, knowledge-sharing and discussion. Fittingly the theme for this year's event is 'Achieving an Integrated Force'. It's an important moment for us to further commit to a collaborative One Defence mindset, and I'm proud to say that DE&S will be there with our largest ever presence. I look forward to seeing you there.

Ukrainian AS90 crews fire the formidable 155mm self-propelled guns, procured and supported by DE&S, as part of the training being provided by the UK.



SENIOR LEADER COMMENT

Meet the team putting international collaboration at the centre of UK Defence

Lois Nicholson, Head of the DE&S International Relations Group (IRG), explains how crucial collaboration with our allies is to our mutual security and prosperity, and how proud she is of the role her team plays in fostering this.

In March, the MOD announced that DE&S had negotiated a deal with FMV, our Swedish counterparts, which secured 14 Archer artillery systems for the British Army. These provide a bridge to the next generation of artillery systems and fill a gap left by UK support to Ukraine.

This government-to-government deal was agreed in just two months, building on the UK's strong and long-standing relationship with Sweden. At the same time, UK and Sweden also agreed to collaborate on the repair and maintenance of vehicles granted in kind to Ukraine.

The conflict in Ukraine, and our collective response to it, has been a clarion call for greater collaboration. It is a stark reminder that our safety and security are only as strong as our alliances, and that, defence and security must always be seen as an international endeavour.

Behind the agreement with Sweden was IRG, working with teams across DE&S, the armed forces and our partners in industry; bringing parties together, establishing the sales agreement and helping the UK make informed decisions and procure at pace.

IRG's mission is to make the most of the opportunities that international collaboration can bring to deliver capabilities to our armed forces to protect our nation and help it prosper. The team works to influence, sustain and strengthen the UK's bilateral and multilateral defence relationships, including cooperative armaments programmes, helping UK Defence to make informed, timely decisions in support of international objectives. At its heart, this is about working collaboratively with a One Defence mindset to harness the power of our international alliances and partnerships.

Two recent examples of this are featured in this edition of Desider. First, the new NATO Defence Procurement Action Plan (DPAP). A game-changing milestone in NATO's defence acquisition and industrial cooperation, and the culmination of negotiations and influence driven by the Conference of National Armaments Directors, which includes our CEO Andy Start, in his dual role as UK National Armaments Director. He, along with members of IRG, wider MOD and cross-government teams, and our equivalent partners across NATO, were key to the DPAP's successful development and its inclusion in the NATO Vilnius Summit.

The second is the Exports Portfolio Management Office, a new team within IRG, which will be the entry point for all government-to-government defence exports. They will ensure that DE&S, as the delivery experts, help make the most of the economic and



diplomatic opportunities that exports can bring. It is further proof of our commitment to UK prosperity and the value of our alliances and partnerships.

Those collaborative relationships are fundamental to keeping the UK safe, secure and resilient. They help us develop capabilities that are interoperable and interchangeable by design, and bring battle-winning technology to our front-line personnel. You may have heard about the international programme to develop and build F-35 aircraft, but did you know that around 15 percent – by both value and material – of each aircraft is British?

In a world of proliferating threats, working together is not an option, it's a necessity. An International One Defence, made up of trusted, reliable partners, is the only way to guarantee our nation's security and our future.

FEATURE

Coming together “for the greater good of the whole enterprise”

John Howie MBE is co-chair of the Defence Suppliers Forum Executive Group and Chief Corporate Affairs Officer at Babcock UK. He spoke with Desider about the forum’s crucial role in ensuring an effective defence enterprise.

The fundamental role of Defence is to keep our country safe and secure so that our democracy can prosper. For that to happen, our armed forces must have capability that matches their operational demands.

This capability is provided by a supply chain that runs from the operational commands to the MOD, into the prime suppliers, and on down through the supply chain.

All successful relationships are based on good communication, shared objectives, and a willingness to find compromises and workarounds. The Defence Suppliers Forum (DSF) provides a forum where that dialogue can take place. DSF was set up to act as the main collaboration space between the MOD and the defence industry, where we can come together for the greater good of the whole enterprise.

The DSF allows the MOD – including DE&S – and the UK defence industry to work in close collaboration towards joint objectives, rather than pulling against each other. Its work helps the MOD better understand what motivates industry, allows industry to see the MOD’s drivers more clearly, and means together we can come up with solutions to address the challenges we’re facing. It enables the defence enterprise to deliver capability to the armed forces, and helps industry and the MOD work together to develop those capabilities in the first place.

It starts with the DSF Main, which sets the strategic agenda for areas of common interest between government and industry and the DSF Executive Group which delivers that agenda. The Executive has voices from across Defence – prime contractors, mid-tier companies and SMEs, as well as senior leaders from MOD and DE&S – and is co-chaired by me and DE&S CEO Andy Start. Beneath that is a set of working groups that cover key areas of interest, like capability management and digital security; all aimed at making the wider defence enterprise more effective and efficient.

We’re currently working to deliver the new DSF Aims and Objectives, which grew out of a realisation Andy and I had when we first took up the roles of co-chair. The changing external environment persuaded us that we needed to go back to basics and ask, what is it Defence actually needs from the DSF?

The conversation happened against the backdrop of the Ukraine conflict and a view that the UK needs a more responsive, resilient, agile defence enterprise, which can get greater capability to the front-line in less time. Ukraine has reminded us that in times of conflict a supply chain has to deal with different pressures from the ones that exist in times of peace.

This means having a strong, secure sovereign UK defence industry that’s ready to react and meet increased demand.



It means more collaborative, long-term planning to make sure when the MOD has a requirement, like munitions, they’re buying it from a factory that’s operating efficiently and effectively, with a steady drumbeat of demand from domestic and export customers. It also means having a supply chain that’s resilient and responsive, and that comes down to demand planning and investment.

There’s a desire, expressed in the Defence Command Paper refresh, for the UK Government and UK defence industry to work in a way that’s collaborative rather than transactional. Where we’d like to get to is integrated programmes with a single ‘programme truth’ shared by the MOD, the prime supplier and down through the supply chain.

We recognise that these are seriously complex and challenging goals we are taking on, but collaboration’s only easy if you never do anything difficult. We’re confident that if we get this right, the DSF will be able to deliver meaningful outputs for UK national security and prosperity.

FEATURE

Defence Command Paper Refresh calls for greater integration with industry partners and allies

The recently published Defence Command Paper Refresh focusses on driving a more robust defence enterprise-wide response to increasing global threats.

DE&S has welcomed calls in the Defence Command Paper Refresh for a closer partnership with allies and industry to ensure the UK has 'robust and credible' capabilities to deter adversaries and defend the nation.

Acknowledging the lessons learned from the Ukraine conflict, Secretary of State Ben Wallace said: "We need to be able to sustain operations today – with sufficient stockpiles of munitions and critical enablers – as well as investing now in the battle-winning capabilities of the future."

The paper calls for speed, agility and ruthless prioritisation when it comes to acquisition.

DE&S CEO Andy Start said: "I am pleased to see a formal recognition that defence must have an even stronger partnership between government and industry to be resilient in this more threatening world. The UK's industrial base plays a crucial role in our national security. By sharing greater understanding about emerging threats and developing the MOD's long-term plans in consultation with industry it will be easier to deliver solutions together."

The paper also recognises the need to incorporate export ability into requirements from the offset, underpinning national prosperity and allowing for improved interoperability and interchangeability with allies.

Putting battle-winning capability into the hands of troops quicker is highlighted in the paper. With the UK defence enterprise facing growing international volatility and increasingly fast technological change, waiting for decades-long programmes to be completed is no longer seen as acceptable.

"The call is for timely delivery at the speed of relevance, and in an appropriate risk-informed manner," added Andy. With the paper setting clear targets to radically reduce timescales both pre-contract and after contract award. "If delivering 80 percent solutions provides the right effect, and can be available to the military safely and more quickly, we must look at that to maintain our strategic advantage.

"At DE&S we are delivering a new strategy that attaches greater importance to driving pace. We have seen this work well in high-risk operations, such as urgent operational requirements and getting capability to support Ukrainian forces, so it can be done."

The Command Paper Refresh is clear in its drive to broaden the UK base of small and medium-sized enterprises and high-tech



The bridge layer and artillery variants of the Boxer modular vehicle at the Salisbury Plain Training Area.

businesses involved in defence. DE&S is working through the Defence Suppliers Forum, its SME Working Group, and the MOD Doing Business with Defence team to increase ease of access.

The Command Paper Refresh also gave a commitment to explore ways in which industry can be incentivised to invest in new technology and skills training for the workforce. The need to train and recruit the right people – in military, MOD and industry roles – was seen as vital to future success.

Andy concluded: "I think the refresh sent out some very constructive and forward-thinking messages that will be positive for our industrial partners, and for the security and prosperity of our nation."



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FEATURE

How the Futures Lab is reinventing collaboration

Rachel Crease, Futures Lab Manager, tells Desider about how the Future Capability Group Futures Lab is bringing people together, from defence and beyond, to collaborate, innovate and guide defence acquisition.

The Future Capability Group Futures Lab is reimagining and reinventing how Defence collaborates.

Futures Lab exists to provide our front-line commands and defence clients with the expert insights that help them to make informed decisions about future procurement in the pre-concept space.

For me, the Futures Lab is built around three things: innovation, exploitation and coherence.

The front-line commands come to us with questions about a future capability. Would this work? Should we buy this technology? How can we reduce the risk of this future procurement to make it a viable option?

We respond by bringing together a bespoke collaborative team to answer them. We're able to access a vast provider 'network of networks', which we use to pull in people with the right skills, experience and knowledge. We have academics, scientific advisors, and experts from companies of all shapes and sizes, from any industry – defence and further afield. We have links into expert spaces, like the Met Office Academic Network, and innovation hubs, like the Defence Science and Technology Laboratory. And because they are working together to come up with an answer, we are able to give the MOD an impartial pan-industry perspective.

If there's a person working away in a shed somewhere who's the right fit to help us answer the question, we want them.

For example, in 2022, the Futures Lab ran a project on the Robotic Enhanced Air Assault Force with a pan-industry team of technology and human factor experts from 15 organisations. The team, which included specialists in robotic and autonomous systems, reservists and even professional drone pilots, came together to explore how emerging technologies can be used to increase the effectiveness of air assaults.

There are many different models for how the collaboration can work and the output that the client needs. It can be 40 people from different companies spending the week together, or smaller sub-groups working on narrow aspects of the challenge. Part of our role is deciding which of those formats will work best to meet the client's brief.

This work is run through the Engineering Delivery Partnership framework, co-ordinated by Atkins, BMT and Qinetiq. They act as technical assurers for the work, ensuring our clients get a complete answer and signing-off that the final documents are safe and accurate.



The real benefit comes through the range of companies and people. It means we can see all the different options and really understand what industry can do. We are committed to at least 70 percent of Futures Lab work being done by companies other than Atkins, BMT and QinetiQ. While they certainly have the expertise, it's fundamental for us that we get that breadth of perspectives.

Everybody's opinion is valid. Our motto is: leave your badge at the door. We get everyone working together to get the best possible product.

The advice our groups give to the Army, Navy and Air Force empowers them to be intelligent, active customers, able to make the most thorough and informed decisions. And in doing so, ensure our front-line personnel have the kit and capabilities to overcome our adversaries.

FEATURE

Valuing every link in the supply chain

Small and medium-sized enterprises are essential parts of the UK defence supply chain. But, for the Doing Business with Defence team, more can be done to help them reach their potential.

The UK's defence aspirations, made clear in the Defence Command Paper refresh, are for a stronger and more integrated sovereign enterprise.

Small and medium-sized enterprises (SMEs) hold a crucial place in the UK defence enterprise. These companies are a backbone of the UK economy and are vital to delivering these defence aspirations. They are at the heart of a vibrant UK defence industry and play an important role in its supply chains. They provide hugely important expertise and support a wide variety of high-quality jobs across the UK.

Yet, despite this, smaller businesses continue to face challenges and barriers that prevent them from fulfilling their potential of delivering defence capability and contributing to UK prosperity. Recognising this, the MOD published the SME Action Plan in January 2022, under the title 'Opportunity and Innovation' – two key benefits that smaller businesses bring to the table. This laid out a route to making Defence a more viable option for non-traditional suppliers and attract a broader range of organisations into the defence supply chain.

The development of future capability is essential for UK defence and SMEs are leading the way in developing the world-beating technologies and services that the Armed Forces will need. For example, the Defence and Security Accelerator, which finds and funds innovative ideas for the benefit of national security, has found that at least 50 percent of the scientific and technical ideas it assesses to be desirable, feasible and viable come from SMEs.

UK defence needs SME suppliers that thrive on agility and disruption to see defence as a priority market where they can focus their creative energy, developing technological advances that maintain the UK's battle-winning edge. However, for that



these companies must have, and know they have, fair access to UK defence and security opportunities. Making procurement simpler and more agile is key to this.

Reflecting this, the MOD's Doing Business with Defence team are working alongside DE&S to enable a more collaborative approach with industry. The team's purpose is to help suppliers access opportunities and innovation in the defence supply chain.

The MOD SME Action Plan acknowledges the need for collaboration with major industry partners. Strategic suppliers have appointed senior SME champions, charged with driving improved SME engagement in their organisations.

The Defence Suppliers Forum, which includes DE&S Andy Start as co-chair of its Executive Group, has established an SME Working Group. Their purpose is to encourage greater participation, and bring in greater diversity of opinion and experience alongside the voices of more established suppliers.

Bringing SMEs deeper into the defence enterprise can lead to enormous benefits. It will bring new energy to the UK economy, strengthen every part of the supply chains and give UK Defence access to vibrant and innovative new spaces. It is in the interest of all to support a sustainable and globally competitive UK defence enterprise.

FEATURE

NATO allies agree to strengthen defence production through new action plan



NATO has approved a Defence Production Action Plan, which promises to speed-up joint procurement, boost capacity and increase cooperation.

The NATO Defence Production Action Plan (DPAP) agreed at the recent summit in Vilnius, Lithuania, signals a step-change in the relationship between NATO nations and the defence industry.

It is the clearest sign yet of NATO's drive towards an alliance-wide One Defence enterprise.

The DPAP aims to strengthen NATO's deterrence and defence by greatly increasing allies' ability to deliver new capabilities and sustain existing equipment. The plan commits allied nations to accelerating joint procurement, boosting production capacity, and increasing interoperability, interchangeability and standardisation of equipment. It will foster more transparent relationships with industry, open up greater multinational cooperation and lead to more agile procurement.

UK thinking and influence have been central to the development of the DPAP. DE&S' International Relations Group and CEO Andy Start, in his role as National Armaments Director, worked closely with

MOD colleagues, the UK Delegation to NATO and international partners to deliver an action plan that reflects the urgency of the situation and the needs of UK Defence.

The DPAP is grounded in the lessons learned since Russia's invasion of Ukraine in February 2022 and the demands placed on both the Alliance and the defence industry as a result of the conflict. These have shown how fundamental a strong defence industry is to NATO's battle-readiness and collective defence.

As the summit's final communique states, the DPAP "will ensure long-term NATO engagement across the Alliance based on the principles of transparency, equitable treatment and inclusive participation. With this plan, and in support of allies' own priorities, we are committed to leveraging the Alliance's role as a convener, standard-setter, requirement-setter and aggregator, and delivery enabler to promote sustainable defence industrial capacity."

Alongside reaching agreement on the DPAP, NATO allies also strengthened the

Defence Investment Pledge at the Vilnius Summit. Under the pledge, nations commit to making an enduring investment to at least two percent of their annual GDP in defence. This will help remedy existing shortfalls and meet the requirements arising from a more contested security context. This will be essential to ensuring that there are sufficient financial commitments to realise the ambitions of the DPAP.

The priority for the UK is to support NATO in operationalising the DPAP and strengthening the Defence Investment Pledge. This will require a whole-government approach, as well as engagement across NATO and with other international partners. The way in which allies work together, through collaborative spaces such as the NATO Conference of National Armaments Directors, and with their industry partners, at a national level and in the NATO Industry Forum, will be central to this.



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FEATURE

A new approach to driving defence exports

Andrew Grimes, Data and Information Manager in DE&S' International Relations Group, tells Desider about how their new team is working to maximise export opportunities for the UK defence industry.

The UK Government places a high value on defence exports. Doing business with overseas markets strengthens our economy, while underpinning our national security and resilience.

The role industry partners play in achieving these objectives is pivotal and DE&S is committed to supporting them.

To create a more coordinated and competitive One Defence approach, which ensures we forge strong, strategic relationships with other nations, DE&S set up the Exports Portfolio Management Office (PMO) in July 2023, within the International Relations Group (IRG).

Our purpose in the Exports PMO is to be the 'front door' for all government-to-government (G2G) export requests into DE&S. This is much more than just selling equipment developed for our armed forces to other countries. It also means taking part in joint development programmes with our allies and assisting foreign governments who wish to engage with UK firms.

The Exports PMO is an agile team, which can be scaled up or down as needed. As delivery experts, we work alongside a wider cross-government group, including the MOD Head Office, which is responsible for the initial assessment of export opportunities. If a new project gets their green light, the Exports PMO will coordinate with the appropriate DE&S project leads to ensure they have the right resources to deliver for the customer.

Our team is adopting a data-driven approach to coordinating international engagements and campaigns, using a bespoke management information system to track and record export opportunities across DE&S. We generate reports that provide important information for the senior government officials developing the UK's Defence Exports and Collaboration Strategy. We also make these available



to selected stakeholders who benefit from knowing our export activities in each country, particularly during negotiations.

In just a few short weeks we have already proved instrumental in facilitating G2G engagement. One example of this is the co-development of an advanced technology demonstrator for an international partner. The country involved sought to do business with a British company, but requested our involvement to provide assurance and establish the foundations for future

collaboration. We assisted in the allocation of resources and funding to ensure the project was viable, economically beneficial and met relevant regulations.

Our objective is to help our commercial partners exploit economic opportunities and integrate the best of the UK's defence industry with our international allies. Through the work of our new Exports PMO – and the wider IRG – DE&S aims to become the most dependable defence delivery organisation in the world.

FEATURE

The UK and the Netherlands reaffirm amphibious military partnership

British and Dutch Governments sign new Memorandum of Understanding and Statement of Intent, marking the 50th anniversary of their long-standing military partnership.

Marking the 50th anniversary of Europe's oldest military partnership of its kind, the UK and the Netherlands have re-committed to furthering bilateral collaboration between the two allies, building on a proud history of shared experience, operations and equipment.

UK Minister for Defence Procurement James Cartlidge met with Dutch Defence Minister Kajsa Ollongren on the Royal Navy's amphibious flagship, HMS Albion, docked in the Dutch port city of Den Helder. There, they signed a Memorandum of Understanding to continue growing the relationship between the two countries, and a Statement of Intent to explore options to collaborate on a new fleet of littoral strike ships.

In a revitalisation of the original Memorandum of Understanding from 1973, the British and Dutch agreed to grow the relationship between the two navies and marine forces, continuing to work together as an interoperable force at the forefront of NATO's maritime response.

The UK's future littoral strike ships, known as multi-role support ships (MRSS), will be a powerful future capability. They will be equipped with a sea-to-land strike capability, designed to operate in amphibious littoral response groups, helping highly-trained marines to deploy and respond to crises around the world, fully equipped with vehicles, boats, aircraft and weaponry.

The Statement of Intent will see the partner nations work together to understand respective joint requirements and timelines for the UK MRSS and Dutch Landing Platform. This will help them assess whether a collaborative procurement programme would be mutually beneficial.

DE&S, supporting the Royal Navy, will play a pivotal role in collaboration with the Netherlands Ministry of Defence to

develop requirements, budgets and schedules.

Minister for Defence Procurement, James Cartlidge, said: "To remain a truly global military, we must procure the right equipment at the right time for our armed forces. The future MRSS will ensure the Royal Marines can continue to deploy overseas fully equipped at short notice. We are very proud to be working closely with our Dutch allies on assessing future procurement options, as well as building on the strong foundation of our 50-year partnership to enhance our collective readiness."

First Sea Lord Admiral Sir Ben Key said: "This year is a particularly special one to be in Den Helder alongside our Dutch

friends, celebrating both Navy Days and the signing 50 years ago of an agreement that has enabled our amphibious forces to train, exercise and deploy together. It has resulted in our closest and most significant amphibious relationship. I am delighted that our nations have today signed an agreement to deepen this through further exercises and training, but, most significantly, to pursue the next generation of littoral strike ships, setting the stage for the next 50 years of our cooperation."

Recently, both countries announced a partnership with the US and Denmark to deliver high-priority air defence equipment to Ukraine, addressing its most urgent air defence requirements.



Royal Marines from HMS Albion take part in a display with their Dutch counterparts.

NEWS

Meet the women engineers that 'make safety seen'

DE&S celebrates the women engineers dedicated to ensuring the safety of its staff and the armed forces' personnel it works to equip and support.

As part of their International Women in Engineering Day (INWED) celebrations, DE&S' Women in Engineering Network has recognised 26 women members of staff whose work has excelled and has embodied this year's INWED theme: 'make safety seen'.

The women were honoured at an event hosted by 18 Squadron RAF at RAF Odiham. During their day at RAF Odiham, they were given an opportunity to ride in a Chinook helicopter and experience first-hand a piece of kit that some of them had worked to make a reality.

Wing Commander Clare Mummery is the Head of Engineering in the Chinook delivery team and one of the DE&S engineers recognised for their commitment to safety. "I personally put safety at the core of my decision-making. I work to pre-empt safety challenges and strive to foster an environment where everyone knows their safety concerns will be listened to and addressed."

Safety underpins every aspect of DE&S' work and is at the heart of the organisation's mission. The call to 'make safety seen' resonates with DE&S

engineers who work hard to improve the safety of their colleagues, the UK's armed forces and allies, and nation as a whole. Their actions help to make DE&S a physically and psychologically safer place to work, and ensure the equipment DE&S procures and supports is safe to use.

Katie Haase is a safety engineer in the Future Capability Group Engineering Assurance team. She was recognised for providing key engineering safety support and guidance to her team, speaking at STEM outreach sessions, and creating safety documents and processes commended by senior leaders.

When asked how she ensures that safety is at the heart of delivery, Katie said: "My approach has been to try and change the outlook on safety by my engineering colleagues, inviting queries without retaliation and providing support and guidance as much as possible. Safety doesn't have to be overly complex and time-consuming, particularly in our short trials. Safety is everyone's responsibility, not just the safety engineers."

When asked what achievement she was most proud of, Zen Nicol, Deputy Head

of Engineering Assurance in the DE&S Weapons Operating Centre, said: "My greatest career achievement so far has been the timely and safe delivery of the weapons integration on to the aircraft carriers for safe deployment on Carrier Strike Group 21. It was a challenging project, constantly evolving, and brought together all of my strengths: multitasking, organisation, solution finding, trials and development and tri-service integration."

INWED is an international awareness campaign, founded by the Women's Engineering Society to raise the profile of women engineers through the celebration of their work and achievements, and to create opportunities to connect and support women in this field.

DE&S recognised these women engineers for their dedication, technical prowess and exemplary leadership. By showcasing their achievements, it hopes to promote a diverse and inclusive culture within engineering, and to encourage the next generation to embrace engineering as a career that is open to everyone.

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NEWS

News in Brief

Boxer arrives in the UK with trials soon to start

The Boxer programme reached a milestone in July, with the arrival of the first batch of vehicles to UK. Following this, Boxer will soon be put through its paces at the UTAC Millbrook Proving Ground.

Boxer is a family of highly mobile, armoured, modular 8x8 wheeled vehicles, which will form a key part of the British Army's Mechanised Infantry capability.

Major General Darren Crook, DE&S Director Land Equipment, said: "This is a significant step forward for the Boxer programme and although there have been some hard yards on the journey and some difficult moments, we've overcome adversity through the selflessness of our people, the dedication of our collective

teams, and purposeful collaboration between OCCAR [the Organisation for Joint Armament Cooperation], industry, DE&S and the British Army. This is a proud moment for the Boxer programme."

A contract worth £2.8 billion was signed in November 2019 between Artec and OCCAR to deliver 523 Boxer vehicles to the British Army. Following the UK Government's Integrated Review in 2021, 100 additional Boxers were placed on contract.

Sixty percent by value of the original contract is planned to come from the UK. This will protect 400 jobs in the West Midlands and north-east Wales, and sustain up to a 1,000 nationally, and includes an ambitious UK apprenticeship scheme.



NIBS

£20 million contract marks big steps towards Challenger 3 missile protection system

A £20 million contract has been awarded by DE&S to Rafael, securing the hardware for the next phase of tests on a cutting-edge new rocket and missile protection system for the UK's Challenger 3 tanks.

The Trophy Active Protection System (APS) will be tested and integrated into Challenger 3 to provide enhanced protection against threats, while simultaneously finding the origin of the

hostile fire for immediate response. It can locate an incoming rocket or missile in less than a second, destroying it by firing back its own ammunition.

The system has completed three weeks of assessment phase trials on the Challenger 3 representative system with a total 25 shots, including live intercept shots. The contract will secure the Trophy APS required for the qualification and integration activities involved in the

upcoming demonstration phase.

David Tomlin, APS lead for the DE&S Land Equipment Operating Centre, said: "Placing this contract will allow the demonstration phase to start in 2024, where the APS system will be qualified and integrated into the Challenger 3 tank. Securing these Trophy long-lead items is another step forward in securing a world-class protection system for our soldiers on the front-line."

NEWS

DE&S at the Royal International Air Tattoo



For 50 years the Royal International Air Tattoo (RIAT) has thrilled aircraft enthusiasts from all over the world, regularly attracting more than 200,000 people.

This year's RIAT showcased numerous aircraft procured and supported by DE&S, including F-35B Lightning II, Typhoon, Poseidon, A400M, Hawk and Chinook, which wowed the crowds with static and aerial displays. In total, 253 aircraft from 25 different nations participate in the Tattoo.

Those attending the event, held at RAF Fairford in Gloucestershire, were joined by 48 Air Chiefs from all over the world, and none other than the Prince and Princess of Wales with their children.

Alongside the general public, the event was also an opportunity for governments, prime contractors, manufacturers, academics and influential aviation experts to meet and network.

One of the highlights was RIAT's Techno Zone, where DE&S graduates and apprentices had an opportunity to showcase projects through interactive activities.

The first activity challenged participants to think outside the box by coordinating 3D-printed aircraft so that an F-35B jet could take off from the aircraft carrier in the quickest time. This was followed by a challenge for young engineers to see how fast they could assemble military jets, such as Typhoon, and compete for a place on the leader-board.



NEWS

DE&S and Royal Navy carry out milestone mine-hunting trials

Trials have been carried out for the first time that combine autonomous mine-hunting systems with the newly-acquired RFA ‘mothership’. These systems will address the rapidly evolving threat posed by sea mines.

In a milestone moment for the UK’s mine counter-measure operations, Royal Fleet Auxiliary (RFA) ship Stirling Castle was joined by autonomous mine-hunting systems and Royal Navy motor boats Apollo, Hydra and Hazard for a series of trials in Portland, on the south coast.

The main aim of the trials, carried out by DE&S and the Royal Navy, was to prove autonomous vessels could be hosted on-board Stirling Castle and eventually controlled or remotely-piloted from the ship. This will be the norm for the ship when she officially joins the RFA fleet following a naming ceremony in August and deploys on operations.

Andy Lapsley, DE&S Mine Hunting Capability team leader, said: “This is an important step in the incremental development of maritime autonomous systems, exploiting new technology to increase performance and reduce risk to sailors. This event was a truly collaborative endeavour across various DE&S teams, as well as the Royal Navy, the Royal Fleet Auxiliary and industry partners. It paves the way for significant advances in the global deployment of this capability.”

Rear Admiral Ivan Finn, Director Navy Acquisition, added: “These trials mark a key milestone in the delivery of the Royal Navy’s Mine Hunting Capability programme. Following

her rapid procurement and delivery at the start of the year, RFA Stirling Castle has now embarked her first autonomous mine counter-measure systems. This has been achieved through the hard work of her ship’s company, the Maritime Autonomous System Trials team, the DE&S delivery team and our industry partners. We can now look forward to having maritime autonomous systems permanently embarked and ready for operations over the coming months.”

Stirling Castle joined the RFA to act as a ‘mothership’ for autonomous mine-hunting systems. When operational, the ship will launch and recover the autonomous vessels, and analyse the data they gather while scouring home waters for mines and underwater explosive devices.

In doing so, the ship and the autonomous systems will replace traditional mine counter-measure vessels, instead exploiting a series of advanced payloads such as towed sonars and remotely-operated neutralisation systems from a remote command centre.

The trials in Portland are part of the Royal Navy’s ongoing Mine Hunting Capability programme. They follow on from separate work to develop the Maritime Mine Counter Measure’s primary systems – amounting to a technological leap forward in mine-hunting operations.





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NEWS



DE&S places £870 million order for new Typhoon radar

The first contract since last year's pledge to invest £2.35 billion upgrading the RAF's high-agility combat aircraft has been awarded.

DE&S has placed an £870 million five-year deal with BAE Systems and Leonardo UK to upgrade radar capabilities on the RAF Typhoon aircraft. The fighter jets will be fitted with one of the world's most advanced radars – the European Common Radar System (ECRS) Mk2.

The news follows the UK Government's commitment last year to invest £2.35 billion on a number of upgrades for Typhoon.

The state-of-the-art radar will transform the Typhoon's control of the air, bringing a world-leading electronic warfare capability that allows it to simultaneously detect, identify and track multiple targets in the air and on the ground. The new system will be integrated on to RAF Typhoon Tranche 3 aircraft and offered to other nations that operate the aircraft, further boosting UK defence exports.

The wider £2.35 billion Typhoon enhancement programme will sustain around 1,300 UK engineering jobs over the next 10 years.

The new £870 million contract, placed by the DE&S Typhoon delivery team, supports more than 600 of those highly skilled jobs across the country, including 300 at Leonardo's site in Edinburgh, 100 electronic warfare specialists at the company's site in Luton, and 120 engineers at BAE Systems' site in Warton, Lancashire.

Lyndon Hoyle, head of the Typhoon delivery team, said: "This is the latest step in a complex and exciting project, and lays the

foundations for the next five years' development and delivery of the new radar. There's a lot of hard work ahead, but together with the recent success in delivering the prototype radar for the next phase of testing, we can reflect on some solid progress achieved together with industry and the RAF."

ECRS Mk2 will support operations in the most challenging situations, equipping pilots with the ability to suppress enemy air defences using high-powered jamming and to engage targets while beyond the reach of threats.

A prototype of the radar is currently undergoing testing at BAE Systems site in Lancashire. Initial flight testing is scheduled to begin next year.

In addition to delivering ECRS Mk2, the overall £2.35 billion investment in radar upgrades will ensure that Typhoon remains a potent weapons capability and enable it to counter emerging threats for many years to come.

Group Captain Matt Aubyn, Deputy Assistant Chief of Staff Control of the Air, Typhoon Programme Director, added: "Typhoon is the backbone of UK Combat Air, capable of completing a wide range of air-to-air and air-to-surface missions. ECRS Mk2 will ensure Typhoon remains operationally effective in the future force mix in an ever-increasingly contested environment."

NEWS

Royal Navy carrier ready to resume her duties

Following nine months of engineering repairs and upgrades, Royal Navy aircraft carrier HMS Prince of Wales has arrived at Portsmouth Naval Base.

HMS Prince of Wales is one of two Queen Elizabeth-class aircraft carriers, alongside HMS Queen Elizabeth. Together, they are the largest and most powerful warships in the Royal Navy fleet.

In Autumn 2022, HMS Prince of Wales suffered a starboard shaft coupling failure. The decision was made to secure the starboard shaft and the ship made its own way to the Rosyth dry dock in Scotland. During the investigation into the cause of the defect, work was carried out on both shaftlines, with careful inspections on all external couplings and alignments.

Since then, the DE&S Capital Ships team has worked tirelessly alongside the HMS Prince of Wales' engineers to return the 65,000 tonne warship to service. They have been supported by colleagues from industry, led by Babcock who operate the facility at Rosyth, and supported by BAE Systems in the technical analysis of the failure to fix the propeller shafts. Alongside the repairs, Babcock carried out planned repairs and inspections, and gave the ship's hull a fresh coat of anti-foul paint, while BAE Systems carried out the planned capability insertion period.

After completion of the work, Captain Mark Hamilton, Capital Ships team leader, said: "The past nine months have been demanding, challenging and fast-paced, but our DE&S Capital Ships team and Ship's company, alongside the service providers and equipment manufacturers, have risen to the challenge of restoring HMS Prince of Wales to sea-readiness. Thanks to their hard work and diligence, HMS Prince of Wales will be returning to operations as one of the most advanced warships ever built for the Royal Navy."

Captain Richard Hewitt, HMS Prince of Wales' Commanding Officer, praised the efforts of all who sought to return the carrier to front-line duties again. "This year, we will be operating F-35s, V-22 Ospreys, drones and Royal Navy Merlin helicopters – pushing the boundaries of naval aviation and UK Carrier Strike capability as we progress towards a global deployment in 2025."

Sean Donaldson, Managing Director of Babcock's Rosyth facility where the work has been carried out, added: "We are proud to have worked alongside the ship's company of HMS Prince of Wales and DE&S to ready the ship for operations."

Now repaired and upgraded, HMS Prince of Wales has successfully moved out of the Rosyth dry dock, completed its sea trials, and sailed to Portsmouth Naval Base.

Jon Pearson, Warship Support Director, BAE Systems said: "It was great to welcome HMS Prince of Wales back to her home port where we are now busy preparing her for her forthcoming operational deployment. The time in Rosyth was a great example of the professionalism, skill and agility across the enterprise and I am proud of the dedication and commitment displayed by our teams in supporting the Royal Navy and DE&S."

HMS Prince of Wales, and her 750-strong crew, will take over from the Queen Elizabeth as the nation's flagship at the end of 2024. This builds on her earlier successes as the chief vessel in NATO's Response Force and her lead role in the NATO Maritime High Readiness Force in the Arctic.

NEWS

New order with BAE Systems to increase stockpiles for British Army

New DE&S contract with BAE Systems for artillery shells and ammunition will increase production capacity and stockpiles.



DE&S has placed an order for 155mm artillery shells with BAE Systems, which will increase the UK's stockpiles and deliver an eight-fold increase in production capacity.

As part of an initial £190 million contract increase, under the long-term Next Generation Munitions Solution (NGMS) agreement, BAE Systems will ramp up production of the NATO-standard round, creating more than 100 new jobs in south Wales and north-east England. The NGMS came into effect in January, replacing an earlier long-term munitions supply arrangement.

The 155mm shells are fired from heavy artillery systems, such as the US M777, France's Caesar and the Swedish Archer, which DE&S recently procured from Sweden to replace the AS90 systems gifted to Ukraine. The shells comprise a high-tensile steel body, which is filled with RDX TNT explosives and fitted with a user-selected fuze. The body is a thin-walled type with high-fragmentation and blast-effect. On the

battlefield they provide an effective mix of range and destructive power.

The UK is one of the many NATO nations to have provided millions of rounds of ammunition and game-changing equipment to the Armed Forces of Ukraine to support their fight against Russia's invasion.

Prime Minister Rishi Sunak confirmed the increase in the UK's 155mm production capacity ahead of the NATO Summit in Vilnius, Lithuania.

Ed Cutts, DE&S Director Weapons, said: "As we continue to help Ukraine repel the Russian invasion, it is crucial we not only replenish the UK's weapons and ammunition stocks, but also increase operational stockpiles so that our armed forces can protect our nation and our allies.

"This additional order will significantly increase BAE Systems' production capacity, delivering an eight-fold increase and secure increased sovereign capacity for ammunition for years to come."

The contract will allow BAE Systems to invest in new and expanded facilities

at Glascoed in Monmouthshire, and at Washington near Newcastle.

DE&S has also placed an order for 30mm cannon rounds and 5.56mm rifle rounds to bolster UK stockpiles.

Charles Woodburn, Chief Executive at BAE Systems, said: "We're incredibly proud of our role in delivering equipment to protect our armed forces and, as the UK Ministry of Defence's long-term strategic partner for munitions supply, we're actively mobilising our operations in support of our NATO allies.

"This multi-million-pound investment will enable us to significantly ramp up production and sustain vital sovereign capability to deliver cutting-edge munitions, while creating and sustaining highly skilled jobs across the UK."

The new ammunition orders have been placed under the existing NGMS agreement – an initial £2.4 billion, 15-year agreement with BAE Systems to manufacture and supply a range of general munitions for the UK Armed Forces up to 2037.

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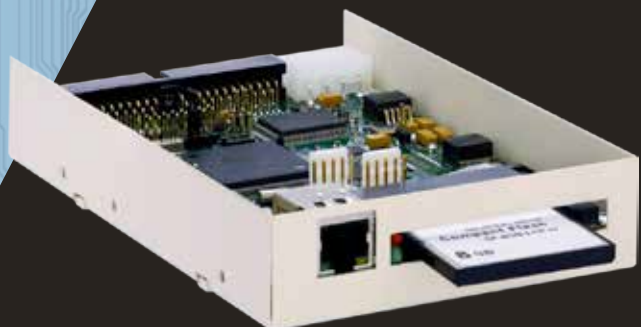
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PEOPLE

Lesley Lowes

Job title:

Safety engineer in the Special Platforms Tactical Communications (SPTC) delivery team

What does your role involve?

As a safety engineer, my role involves providing professional safety advice to our armed forces community and safety support to other specialist platforms. I manage safety case reports, hazard logs, hazard identification, hazard analysis, legislation, and policy and regulations compliance. I lead multiple safety panels, including project safety and environmental panels, and hazard analysis and safety working groups.

What do you most enjoy about your job?

What I enjoy most is that every day presents a different challenge and is fast-paced with multiple deadlines to meet. I like being busy and productive. My job is very rewarding due to the people I work with and having the best multi-function team around me. My role requires me to liaise closely with SPTC engineers, project managers and operations managers to ensure we deliver capabilities that are safe to use.

What is the greatest accomplishment in your career so far?

My greatest achievement was providing additional safety management support to another delivery team. My advice enabled them to deliver high-quality safety documentation and guidance with more confidence. This support led to me being given a special bonus award, recommended by my chief engineer and endorsed by my team leader.

What keeps you energised about working at DE&S?

What keeps me energised is the different skills that I can develop. I like to keep learning and DE&S has multiple training courses from online to university degrees. I had the privilege of studying a one-year course in Systems Safety Critical Engineering at University of York.

My job also allows me to meet new people, join networks and attend forums, including the Women in Engineering Network and the Air Environmental Forum.

Knowing that I am a respected member of DE&S and being rewarded when I deliver great outcomes really helps keep me energised.

Who or what has shaped who you are?

Working within DE&S has given me the opportunity to discover new talents I never knew I had. The organisation has encouraged me to develop and helped me achieve my goals. The support of work colleagues, family and friends that have believed in my ability has shaped me into who I am now, enabling me to be the best at what I do.

What do you enjoy doing in your spare time?

I like to watch most sports, especially football, cricket and golf. I like to take my camera down to the beach or on a walk in the countryside, taking pictures of landscapes, wildlife and flowers. I spend time with my son in Liverpool and family in Scotland and Newcastle, and socialise with friends.

What might surprise people about you?

I started my career as a telephonist in the Women's Royal Naval Service aged 18. All the training and discipline I've learned has given me the skills and confidence to become a trainer, mentor and functional development officer to others.

What's the best advice you've ever been given?

The best advice I've been given over the years is, 'Believe in yourself'.





EDITOR'S CHOICE

Royal Marines Brigadier Andy Muddiman salutes the Scottish Korean War Memorial at Becaigs Country Park, Scotland. 27 July marked 70 years since the Armistice between North and South Korea came into force. 60,000 British troops were involved in the three-year conflict and 1,100 lost their lives.

Want to receive Desider direct to your inbox? Email: Jonathan.mazliah100@mod.gov.uk

Cover photo: Royal Marines from HMS Albion take part in a display with their Dutch counterparts, as part of celebrations marking the 50th anniversary of the UK and Netherlands Amphibious Force.

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