

# DESIDER

AN INSIDE LOOK INTO LIFE AT DEFENCE EQUIPMENT & SUPPORT



**DEVELOPING FUTURE CAPABILITIES | DE&S VISION FOR 2022**

Proudly delivering for the UK's Armed Forces

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# Foreword

BY SIR SIMON BOLLOM



**The Government's Integrated Review conveyed a significant responsibility on DE&S to drive and deliver changes to the programme and the way we do things in acquisition and support. These changes are well underway and our people, their motivation, skills and experience are the critical factor in making this happen.**

We cannot deliver transformational outcomes in terms of pace and agility by continuing with the same processes and approaches that we have used before. The defence led Acquisition and Approvals Transformation Programme (AATP) provides a framework in which we can be imaginative, test new approaches and deliver with greater certainty, as is currently underway in the National Flagship and Combat Air Programmes.

The DE&S workforce is critical to these outcomes and we already have an extremely dedicated and skilled blend of civil servants, military personnel and contractors working hard to deliver. Upskilling the workforce has been a priority through our transformation programme which started in 2014. The new programme management and project controls functions were a key step forward

in professionalising the business of programme delivery. We are determined to accelerate the leadership upskilling agenda across all our functions; this being a key element of the DE&S 2025 Strategy.

There is strong competition for these types of skills, broader than just in the Defence industry. Energy and construction are also facing skills shortages and we will need to compete effectively in the marketplace to retain our people and to attract new entrants. We need to continue to make our offer competitive, embrace the new culture of smart working and endeavour in the aim to make DE&S a continually improving Great Place to Work.

By investing strategically in our people, we can continue to keep pace with the rapidly changing character of conflict and global engagement. It will continue to be the talent, commitment and professionalism of our people, and our workforce of the future, that will drive the change required to deliver the battle-winning edge for the UK. And we recognise that by building the skills of our people and helping them learn new skills we will be best equipped to deliver.

For the coming year, my key priority for DE&S is for us to quite simply get better. We need to continue to focus on delivery to time and cost but we also need to look at how we can really engage with the digital age and get technology into service quicker. My job is to create the right environment which is exciting and challenging and that persuades people to remain and attracts new people from the outside who want to make a difference for the country.

It's clear to me that DE&S has some of the best professionals across defence and what we achieve amazes me daily. This all comes down to the skill and commitment of a very dedicated workforce who I am very privileged to lead.

SENIOR LEADER COMMENT

# DE&S Director Human Resources, Jill Hatcher

Talks to Desider about how DE&S people are instrumental to the success of the UK Armed Forces

**The key to DE&S' success is without doubt the dedication and professionalism of its people.**

Our people remain at the core of everything we do and we continue to invest in skills and capability to ensure that DE&S delivers the operational advantage our Armed Forces need.

Creating an inclusive environment where skilled people are engaged, empowered and inspired to be the best they can be is my goal as DE&S' director HR. A key focus of my role is to continue developing our people, tools and processes to further improve our programme delivery capability and performance.

We are investing in our people to ensure we have the right skills and capabilities demanded by our clients. We recognise that our people are critical in successful delivery and we will continue to invest in their career development. Our commitment to this has been recognised this past year with DE&S winning Best Larger Employer in the South West and becoming finalists for the best apprenticeship programme, best graduate recruiter and best apprenticeship provider. We want to ensure that our people learn the necessary skills and gain the knowledge and experience required to embark on a rewarding career in DE&S. We understand that the commitment and professionalism of our people will help us achieve our mission. And by nurturing the diversity of skills and experience, we'll be able to solve our toughest challenges yet.

Over recent months we have grown our specialist skills and capabilities in complex acquisition, support and contract management - but we must do more to keep ahead of the changing defence landscape.

To understand our future skills requirements and to ensure we are creating the right pathways for upskilling, we have started work to gain views from DE&S key stakeholders. This work captures our need to build future skills away from the current demand signal towards new skills and calculates how our existing skills might transition. This will ensure we are best positioned for successful delivery in response to our clients' priorities.

Considering future skills helps provide us with a clear understanding for functional upskilling plans, new skills planning, key areas of concern and will also support DE&S in planning and changing their resource signals.

While this is a work in progress - and will continue to be as the requirements from our clients constantly evolve - a clear indicator is our appetite to invest in integration of rapid technologies, systems, automation, and enable technological advances. Considering our environmental impact is also paramount.

We've identified our baseline Suitably Qualified and Experienced Person (SQUEP) requirement using the data from our Success Profile self-assessments, and used this to identify where we can grow skills capability with tailored learning to address skill gaps.

DE&S undertake extremely complex work that matters to the nation, and we're driven to do it better every day. We continue to collaborate with partners both inside and outside of DE&S to ensure we are attracting the right people into the right future skills programmes at all times. I'm extremely proud of our unique Apprenticeship and Graduate opportunities - we have 7 functions

offering a total of 16 schemes in this financial year and our future programmes are being reviewed with the hope to include Space and Cyber programmes to ever expand our development opportunities.

As we look to the future we will continue to promote a culture that enables people with the right skills and behaviours to thrive and excel as we continue to deliver the very best for the Armed Forces.



Our people remain at the core of everything we do and we continue to invest in skills and capability to ensure that DE&S delivers the operational advantage our Armed Forces need

SENIOR LEADER COMMENT

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FEATURE

# Lieutenant General James Swift, Chief of Defence People

James Swift sets the people policies and processes to sustain the delivery of defence outputs through the right mix of sufficient, capable and motivated people. Here he speaks to Desider about DE&S' role in supporting an evolving Defence.

Our people, civilians, service personnel, their families and veterans are the reason I continue to serve. They have always been the critical component of Defence capability and will continue to be in the 21st Century. However, we must recognise the need to constantly evolve as the Defence landscape transforms in order to retain our edge and deliver the operational advantage our Armed Forces require.

Being responsible for the people agenda across Defence, I have the overall responsibility for ensuring that Defence has a cohesive, engaging, affordable and deliverable people strategy - pivotal in delivering transformational change across Defence.

In recent years we've made great progress to improve the working life of military and civilian personnel, and huge strides in our support for veterans and families. But we must continue to make sure our workforce is the workforce we need of the future. As we respond

to rapidly evolving threats to our values and way of life, our people – military and civilian – will remain fundamental to delivering our competitive advantage.

UK Defence maintains the very best specialist skills and knowledge but as the world changes around us, we must continue to invest in our people and equip them with the innovative skills required to win in the era of global systemic competition. While also attracting the UK's leading talents, we must continue to foster an environment that genuinely empowers us to be the best version of ourselves.

It's our job to protect our people, territories, values and interests at home and overseas, through strong Armed Forces and in partnership with allies. As

we respond to rapidly evolving threats to our values and way of life, our people – military and civilian – will remain fundamental to delivering our competitive advantage and key to this is working collaboratively across Defence to ensure that the UK retains and develops its world leading skills.

Our people are our most important resource. By continuing to attract a more diverse workforce with the skills and experience required to operate in the information age, this will allow us to invest in and exploit rapid technology development.

As we respond to rapidly evolving threats to our values and way of life, our people will remain fundamental to delivering our competitive advantage

Diversity of thought and experience and a willingness to listen and hear alternative perspectives are critical to delivering our mission. And Defence will be stronger the more inclusive and diverse it is.

I look forward to continuing building on the great work of the department alongside DE&S to help make a difference for people across Defence.



DE&S illustrator, Hannah Bone

FEATURE

FEATURE

# DE&S ExCo vision for 2022

Here the DE&S Executive Committee share with Desider their goals for 2022



**Adrian Baguley,**  
Director General Strategic Enablers  
and Deputy CEO

A significant personal objective in 2022 is to support the transition of senior leadership and the new CEO to the best of my ability. It's been an honour to work closely with Sir Simon and witness, first-hand, his culture of working with Command and with Industry colleagues constructively - challenging all to strive to improve. On a personal level I remain determined to streamline overly bureaucratic and cumbersome processes that can disempower – especially around approvals.

As we deliver our 2025 Strategy, I am passionate about modernising our infrastructure, and our ways of working. I was thrilled that we created the Innovation Bridge this year; generating an inspiring space where people can come together, physically and virtually, to collaborate to modernise our delivery to the Armed Forces. There are many project delivery successes throughout this year, all of which I am immensely proud, but perhaps a defining moment was DE&S securing ISO9001 accreditation. It has been a five-year journey to grow and embed our functional processes and exercise them consistently across the organisation. While DE&S has some external critics this external professional accreditation is a great recognition of the excellent work of many and the improvements that we have made.

A key learning from this year has been the successful employment of short-term sprints to bring knowledgeable and talented people together to galvanise momentum on key improvement activities. Often in MOD we dissipate effort across too many concurrent change tasks; focused effort can really help move the dial quickly.



**David Johnson,**  
Director General Finance

As ever, we need to continue to do the basics well. We had our best ever set of audit results in 2021, across all three audits and we need to maintain or improve on the standards we have set. Both in year and over the ABC period we need to keep improving our forecasting, which is not yet as accurate as it needs to be. We need to keep driving for efficiencies. We need to develop our Infrastructure Strategy and get to grips with the Carbon Net Zero challenge. We also need to exploit MyHR to help us improve our people management.

Over 2021 there were countless examples of success. DE&S people have done amazing things to deliver outputs remotely. As well as delivering on audit and budgetary control, we have absorbed new requirements in lease accounting and Cabinet Office controls. We have delivered several new or improved dashboards and saved huge amounts of manual effort, kept the workplace COVID-safe and started adapting it for new ways of working. We converted most of our learning and development activity to a digital basis, and we have continued to deliver large efficiencies. In 2022, we must continue to improve our forecasting, reinvigorate our track record of driving cost down and really understanding our skills base.



**Krishna Dhanak,**  
Director Strategy and Corporate Operations

Delivery of some of the most complex projects in government is our challenge - one that we relish. And delivery - safely, securely and at pace - into the hands of the operational user is our absolute bottom line. With ever evolving threats and technological advances to fully exploit, making our DE&S 2025 Strategy a reality is my focus. Just six months after its launch, I've been impressed at how quickly it has been embraced - but of course, the proof is in the delivery.

Built around five distinct priorities, our strategy is intrinsically linked. For example delivering equipment solutions at pace, while maximising value in our products and the way we operate, requires us to truly embrace digital solutions. We need to exploit new technology quickly to reduce the time and cost it takes to field capability and to monitor and predict the operational performance of our deployed systems. Innovation is a word that gets used a lot across Defence but the challenge is getting it into the hands of the users operationally.

As Director Strategy and Corporate Operations, my focus is on the enablers to delivery. Some of that is about championing the newest elements of our corporate strategy and on continuing to get the basics right in terms of our corporate governance. Two areas for personal focus this year are on security and on building on the work we've done to create a modern, flexible working environment and culture.

Security by Design. I think it is fair to say, we've all learnt a thing or two about resilience over the last two years. Having secure and resilient supply chains and military capability has never been more important. A priority for 2022 is to really drive a change in our approach to security. Secure By Design, aims is to get better at delivering systems that are secure from the outset and maintaining these through-life. And the new Defence Suppliers' Forum Protective Security Sub-Group will help us in Defence and our partners in industry to collectively up our game.

Improving our working environment. I continue to be impressed by the achievements of our people, despite the turbulence of the last two years. One benefit of that turbulence is an increase in our appetite and ability to work flexibly. The focus this year is to make the working environment better support that - through physical infrastructure and technology, our policies and our culture.



**Chris Gardner,**  
Director General Ships

The launch of the DE&S Strategy provides the cornerstone for taking forwards the Ships Domain Strategy. This will pull together both the ongoing journey we need to take corporately within DE&S. It also shows how we need to continue to configure and support our clients to drive the delivery of capability, availability and support to meet operational commitments.

This is an exciting time for maritime given unprecedented levels of investment backed by a National Shipbuilding Strategy and a Naval Enterprise Support Strategy. This is demonstrated by the cut steel on the 3rd Type 26 this year, the first Type 31, and the Fleet Solid Support and National Flagship Programmes achieving key milestones. In support we have landed the Future Maritime Support Programme whilst supporting the successful delivery of the Carrier Strike Task Group deployment. All of this acts as the icing on a daily drumbeat of activity across the Domain that is supporting our Armed Forces successfully.

Looking ahead to 2022, I will be looking to continue to evolve the One Team approach. But equally, we will continue to both look to get the basics right as well as deliver real empowerment to the teams. Part of this needs to focus on industry performance which is still not where we need it to be, especially in terms of managing risk and being able to adhere to schedule. This will be central to how we take forwards future acquisition and support transformation.

As I enter my final year in post, I think we can look back with pride on what we have delivered and achieved and looking ahead I am determined that my successor will be able to build on this going forwards supported by a truly empowered, diverse and inclusive working environment where people can fulfil their full potential.

# DE&S ExCo vision for 2022



**Rick Thompson,**  
Director General Air

When I look back at 2021, I'm immensely proud of how the Air Domain pulled together to deliver outstanding support to the Front Line and the UK. I must single out how the Domain supported the evacuation of 15,000 people at short notice from Afghanistan during Op PITTING: an incredible and inspiring achievement. We also together delivered over £4Bn of equipment and support and banked nearly £300M of efficiencies that will benefit our customers over the next decade, while responding to the Integrated Review outcomes and wider programmatic challenges.

From delivering cutting-edge synthetic-based training facilities, striving for availability improvements on key platforms, negotiating major support arrangements, and taking further steps to develop the Future Combat Air Strategy, I'm sure 2022 will bring more successes, challenges, and proud moments. As always, my main priority is to ensure we deliver against the promises we make to our clients; providing safe, capable equipment and support that enables the Front Line to deliver their operational duties effectively. We will also continue to look for ways to harness the professionalism and creativity of our people, building on our hybrid working experience to find the best way to deliver our outputs, while encouraging the wellbeing and engagement of our teams. I also want to reflect on the lessons of the past year, particularly around governance and management information, and embed opportunities to further improve our delivery and enhance our professionalism.

These are not new or surprising priorities, but, for me, they remain at the heart of successful delivery. I am excited about the year ahead, and if I am to make one personal pledge, it is to seize every opportunity to celebrate the dedication and skill that lie behind the many successes I know our Air Domain teams will accomplish in 2022.



**Chris Bushell,**  
Director General Land

I could not be prouder of the Land Domain's delivery to our customers in 2021 despite COVID-19 frictions and the Integrated Review (IR) workload; 2022 will, however, be no less challenging.

Having secured a significant increase in funding in the IR, my priority for 2022 will be to deliver on the commitments that we have made. This means developing with industry, the Front Line Commands (FLCs) and other partners realistic plans for delivery and then driving them home to meet performance, cost and time.

The Land Domain's achievements during 2021 have been significant; both in the acquisition of new capabilities and of equal importance, the enduring support we provide to a multiplicity of operations on a global basis. There are many successes that I could mention across our Helicopters, Land Equipment and Weapons Operating Centres, but I highlight our achievements in the Challenger 2 Life Extension Programme Interim Critical Design Review (delivering enhancements in protection and lethality) and initial operating capability for Advanced Short-Range Air to Air Missile Block 6 – both achieved early. We also achieved submission to the Military Aviation Authority of the Apache AH-64 Initial Release to Service (a key step in getting the new airframe into service), Brimstone 3A Air to Surface missile initial certificate of design and Networked Land Ceptor Ground Based Air Defence Certificate of Design, which all contribute to bringing new or enhanced weapon capabilities into the hands of our service personnel.

The key learning point I take into 2022 is to identify issues with key programmes early, to then better communicate those issues to our customer and - most importantly - to draw in the right people to work together to seek solutions. For the Land Domain we have had some very public challenges, which have shown that if we don't tackle things head on, we miss the opportunity to course correct and address the concerns collectively. My pledge for 2022 is that we will continue to prioritise output delivery and safety across our portfolio working closely and collaboratively with both our customers and industry. I commit to continuing to invest in our teams and empower our people to achieve their full potential in order to drive forward a culture of continuous improvement and constructive challenge across all aspects of our business.

2022 will, I believe, provide many more opportunities to make a real difference to the capabilities available to our Armed Forces, a challenge that I and my leadership team relish.



**Jill Hatcher,**  
Director General HR

My personal and team priorities for 2022 are aligned to the core purpose of our People Strategy which is to create an inclusive environment where skilled people are engaged, empowered and inspired to be the best they can be to deliver the DE&S mission. We are aiming to publish our new people strategy in early 2022 and to then deliver against four core pillars, namely: culture and inclusion; leadership, skills and growth; our people offer; and core people activities. Delivering against these pillars will ensure that we honour our commitments of DE&S Strategy 2025 and ensure we have a diverse and professional workforce, empowered, and equipped to deliver for our Armed Forces.

As I reflect on 2021, there are many successes, but I will capture them all by simply highlighting and acknowledging how hard HR worked within the covid context to continue to deliver a range of business as usual HR services across the civilian and military sphere, as well as delivering a number of change programmes such as our new attraction approach. CIPD recognised the efforts of our Entry Talent Team by selecting them as finalists at the recent CIPD awards.

In terms of moving from 2021 into the new year, I would like us to accelerate further still our journey on diversity and inclusion, in order to truly harness the diversity of thought and experience all of our wonderful colleagues and future joiners can offer within DE&S.



**Andrew Forzani,**  
Director General Commercial

As I look back over the last year, I am really proud of how commercial colleagues were able to work with industry to keep programme and contract delivery going in challenging circumstances whilst at the same time progressing a busy change and improvement programme of reforms coming out of Defence and Security Industrial Strategy (DSIS) and the Integrated Review (IR).

Some of these highlights were the implementation of a new sourcing portal across Defence which now hosts all of our competitions, agreeing all o/s COVID claims with our suppliers and the rolling out of a completely refreshed approach to how we manage contractor risk through the liability limits we agree. Added to that we have made significant progress in the changes and improvements we are making to the regulations that govern how we run both competitive and single source procurement with these set to be agreed by Parliament in 2022.

On a more personal note, I joined the Executive Committee in July 2021 in my new role and began a review of the Commercial function across the whole of Defence. My vision for that review was to build an operating model and culture for the Commercial Function that would create a single commercial community. My focus for 2022 is to implement these recommendations, complete the recruitment of Director roles into our new leadership structure and ensure we are setting the right conditions and culture for success.

One of the areas of learning for me in 2021 is how hard it is to deliver significant change across Defence as demonstrated by the slow progress we have made in implementing Category Management. Despite a mandate from the top and lots of talented people working extremely hard on the programme, it is a real challenge to get different groups across the system with different agendas and motivations to agree and support this different way of working. The Department is still very committed to the programme but we will have to learn the lessons from the last 12 months in order to make significant progress.

## FEATURE

# Royal Navy's Carrier Strike Group

**DE&S is immensely proud to have played its part in the maiden operational deployment of the Royal Navy's Carrier Strike Group.**

HMS Queen Elizabeth and her accompanying fleet of ships, aircraft and submarine returned to Portsmouth and other UK bases in December after almost seven months at sea.

It marked the end of an ambitious voyage which took in visits to more than 30 nations including India, Japan, Republic of Korea and Singapore, covering 43,000 miles.

The most significant peacetime deployment in a quarter of a century, Carrier Strike Group 21 (CSG21) was more than just a military endeavour, bringing together elements of defence, diplomacy and prosperity and flying the flag for Global Britain.

Years of work by DE&S went into gearing up for CSG21, including complex planning and preparation, trials, testing and collaboration by teams across the business.

Captain Pete Mackay, Capital Ships Strategic Class Authority team leader in Naval Ships Support, said: "It gives the team a huge amount of pride to see that the careful planning and five years of effort to support HMS Queen Elizabeth's journey from a brand-new ship to a fully-fledged aircraft carrier capable of operating fifth generation aircraft across the globe has been demonstrated so clearly during CSG21."

CSG21 saw a number of milestones reached, including initial operating capability declared for the Martlet missile system, delivered by the Weapons Operating Centre and Wildcat team, after a successful test firing by the Royal Navy from a Wildcat helicopter.

Before the deployment began, HMS Queen Elizabeth stocked up with operational stores at the DE&S-

**DE&S is immensely proud to have played its part in the maiden operational deployment of the Royal Navy's Carrier Strike Group**

operated Glen Mallen jetty in Scotland for the first time.

And, ahead of CSG21, maritime IOC was declared for the F-35B Lightning fighter jets on board. They went on to make more than 3,000 deck landings.

The flotilla of nine ships led by HMS Queen Elizabeth set sail from Portsmouth at dusk on May 22. There were Type 45 destroyers HMS Diamond and HMS Defender; Type 23 frigates HMS Richmond and HMS Kent; HMS Artful below the waves, plus Royal Fleet Auxiliary support ships RFA Fort Victoria and RFA Tidespring.

More than 30 aircraft also embarked including F-35Bs, Merlin and Wildcat helicopters. With more than 3,700 personnel involved, supplying the servicemen and women with everything they needed for life at sea was essential.

DE&S' Logistics Commodities and Services Transformation contract ensured this was possible when CSG left the UK.



**Years of work by DE&S went into gearing up for CSG21, including complex planning and preparation, trials, testing and collaboration by teams across the business**

Cdr Richard Wild, domain account manager (maritime/air), said: "Before the platforms deployed we were involved in supplying everything from food, clothing, medical supplies, general stores, oil lubes and gases.

"While the Task Group was deployed, we were involved primarily in ensuring the flow of equipment to support operational defects to the platforms. I feel that what has been achieved in deploying a Carrier Strike Group should really be something that DE&S can be proud of."

Portsmouth-based LSOC logistics operations support manager Wayne McGrath added: "Putting together the many pieces of the support jigsaw had its challenges, however it is rewarding to see the CSG return from deployment with no known logistical problems."

The British Forces Post Office (BFPO) played a key role in keeping the crew of CSG21 in touch with friends and family back home as they travelled the globe. It was the biggest deployment they had been involved in for 15-20 years.

Kam McKinley, Head of BFPO, said: "We've supported 21 locations, from Gibraltar to Japan, sending everything from classified material to things like navigational charts and personal mail, sweets and chocolates as morale-boosting packages. For our military colleagues who are away from home, especially for long periods of time, often the packages that we send are their only connection with home."

CSG21 was also the first military deployment where Crowsnest – the airborne surveillance and control capability which has replaced the Sea King Mk7 – was used on three of the Merlin HM Mk2 helicopters on board the carrier.

Crowsnest programme manager Paul McDermott said: "Seeing the Merlin Mk2s with the Crowsnest roll kit embodied, embarking earlier this year for CSG21 was an incredibly proud moment for myself and the team and reflected an immense amount of work done across the stakeholder community."

Wing Commander Hill, the supply chain manager in the Lightning Delivery Team, said: "My team, working closely with all elements of the Lightning Enterprise both within the UK and within the US-based Joint Programme Office, have been actively involved in the facilitation and management of the resupply of spares to the ship to sustain the F-35Bs which, given the large logistical footprint we have been operating within, has been complicated and challenging but not without reward and success."

Peter Ashford is based at HMNB Portsmouth and is the through-life manager for HMS Queen Elizabeth.

He said: "CSG involves thousands of people, all the way back into third-tier suppliers, responding quickly to react to a problem that the ship has and whether they get that right support in the right place at the right time. In my career highlights, the aircraft carriers is the top of the tree."



## NEWS

# Major investment in front-line pilot training



A state-of-the-art centrifuge - a machine with a rapidly rotating container that applies centrifugal force to its contents - which is used to train front-line pilots and can accelerate up to 9G, has received a £12-million boost from DE&S.

The DE&S Flight Simulation and Synthetic Trainers (FsAST) team placed a support contract with Thales UK for the High G Training and Test Facility at RAF Cranwell, through to December 2024.

The centrifuge features a 7.5m arm, on the end of which is a gondola that accelerates up to 9G in one second - nine times the normal gravitational pull of the Earth. It rotates up to 34 times a minute and replicates flying an aircraft such as the Hawk, Typhoon and F-35 Lightning.

The £44-million equipment is used to reduce the aviation risk to life of G-induced loss of consciousness through high G training and research.

High G is used by all student pilots in the Royal Navy and Royal Air Force who are progressing through the UK Military Flying Training System - managed by DE&S - and into their flying careers. The pilots must pass an initial High G training sortie before they are permitted to fly a military aircraft for the first time. Pilots must go back through High G every time they progress to a new aircraft type, with increasing 'G' values and sustained levels to replicate faster jets.

The replica, flyable cockpit delivers realistic and immersive training, helping to simulate real-life missions while teaching pilots to deal with acceleration and High G-forces.

Thales operates the 39-tonne centrifuge in partnership with the RAF Centre for Aviation Medicine. It is an essential part of the aircrew training pipeline, with over 1,700 training sorties - each lasting around 20 minutes - conducted since 2019, when High G was delivered by FsAST.

High G is also used to research the effects of acceleration on air and space equipment at up to 12G (when unmanned).



## FEATURE

# Celebrating DE&S staff in New Year Honours

Civil service and military personnel from across DE&S are among those who were recognised in this year's New Year Honours list. Military personnel from across the three services have been honoured by Her Majesty The Queen in the annual New Year Honours list for bravery, commitment and commendable service. DE&S staff were among those recognised for their exceptional hard work and service to the United Kingdom and Desider now celebrates this outstanding achievement.

**Vice Admiral Sir Christopher Gardner**, Director General Ships was awarded the Knight Commander of the Order of the British Empire (KBE), in recognition for his sustained and dedicated service over many years in the area of Defence and warship procurement and support. On his recognition, Chris said: "The key point is that any achievements are always delivered by a team of people and I consider myself fortunate to have such an excellent group around me at all levels within the Ships Domain. They can all share much of the credit for this and I hope this reflects equally on DE&S and colleagues in Navy Command."

**Captain Alastair Marshall**, Commissioning and managing organisation, Strategic Enablers, has been working for DE&S for the past seven months and joined the Army in 1992. Having served for 29 years, Captain Marshall was awarded a Commander Field Army 3\* commendation for his work as Quartermaster of 11 Explosive Ordnance Disposal (EOD) and search regiment, Royal Logistic Corps. After being notified of his commendation, Alistair celebrated at home with his wife and two daughters. He said: "I am absolutely honoured to have received this award, I am however, equally aware that it was a team effort from within the technical department of the quartermasters. To be nominated and subsequently awarded a commendation is a great honour. For me it speaks volumes about the leadership of those that took the time and effort to nominate me."

Much to his surprise, **Carl David Proctor** from the DE&S Typhoon team was among those recognised in the New Years Honours and was awarded a Meritorious Service Medal for his 36 years of service in the RAF. The Station Commander from RAF Coningsby informed Carl of his award. On this achievement, Carl, said: "I feel honoured. After all this time in the service there are not many guys from my 1985 intake still in the RAF who joined when I did. Fellow WO's, colleagues and friends have been in touch to congratulate me."

After 37 years of service to the RAF, **Warrant Officer Robert Edward Davies** was also awarded a Meritorious Service Medal. Robert celebrated this recognition with friends at New Year and said: "I'm honoured to be considered and very proud for receiving this prestigious award. I'm very surprised at being nominated and I never thought of receiving this. I feel blessed and honoured with being recognised."

**Flight Lieutenant Kevin Davies** from the DE&S Marshall team was awarded a Deputy commander operations and Air member for Operations commendation for his work on several major projects and Group wide rollouts at 11Gp Air Command Head Quarters. Kevin, said: "I am extremely honoured and proud and was not expecting to be honoured but it is one of the highlights I shall carry through my career and after leaving. I never expected to ever receive such recognition, I truly believed that it was something that was outside of my chances of achieving."

**Warrant Officer Wayne Nicolson**, Apache delivery team, has served in the RAF for 23 years and received a Chief of Staff (Support) commendation. This commendation followed Wayne's work at RAF Centre of Aviation Medicine managing aircrew equipment integration trials on numerous aircraft types. Wayne, said: "It was unexpected but I am grateful to have been recognised for the work undertaken whilst employed at the RAF Centre of Aviation Medicine, and that our output has directly contributed to enhancements in operator safety across the RAF, RN and AAC."

Vice Chief of Defence Staff (VCDS) Commendations were also awarded to **DE&S Deputy Head Commercial - Air Systems Equipment Martin Hicks** and **DE&S APS Air Support, Darren Collis**. Martin takes significant pride in being recognised and has worked for DE&S for over five years. Martin, said: "I see this not as a personal award but as recognition of playing my part in a much bigger team. It's very much a valued way to reflect on being part of a challenging, ongoing project within an excellent team."

"Congratulations to all our DE&S colleagues who received Queens New Year 2022 Honours this year."



## FEATURE

# A successful year for the Weapons Operating Centre

**DE&S Weapons Operating Centre (WOC) enjoyed a busy and fruitful 2021, with numerous successful test firings and trials of complex weapons.**

**Members of the WOC engaged in important activity across the globe, from the USA to the Outer Hebrides and from Sweden to the Pacific Ocean.**

Last summer, after years of planning and COVID-19 delays, the MBDA-developed SPEAR Cap 4 upgrade of the Storm Shadow missile was put through its paces at US Naval Air Warfare Centre China Lake.

This operational evaluation (OpEval) saw four missiles successfully launched from RAF Typhoons, proving the effectiveness of this latest upgrade to the weapons system, including operations under GPS jamming conditions. DE&S Long Range Precision Strike Delivery Team leader James Dowson said: "Our LRPS deployed team in the US, led by Wayne Bantick and supported by all in the UK team, have expended tremendous effort to deliver an incredibly complex trial in very demanding conditions."

In October, the new lightweight Martlet system achieved Initial Operating Capability (IOC) following a successful firing against a floating target. The missile was launched from an embarked Wildcat HMA Mk2 helicopter, of 815 Naval Air Squadron, during Carrier Strike Group 21.

The new anti-boat swarm missile system provides an offensive and defensive capability for a carrier strike group and will help protect the two Queen Elizabeth-class aircraft carriers from attacks by small boats. Royal Navy Air Wing Commander, Capt James Blackmore, said: "This first firing during an operational deployment not only gives confidence. But also offers an overt demonstration of one of the many strike capabilities provided by the Air Wing from within the Task Group."

Other notable milestones in 2021 included the firing of an Aster missile from Type 45 destroyer HMS Dragon in the Hebrides Ranges last May as part of the NATO International Integrated Air and Missile Defence (IAMD) live-firing exercise known as exercise FORMIDABLE SHIELD 21.

Land Ceptor also achieved notable success following testing last June. Three successful firings were conducted at the White Sands Missile Range in the US. Similarly, CAMM was surface launched from Type 23 frigate HMS Portland to demonstrate its Fast Inshore Attack Craft (FIAC) capabilities.

ASRAAM Block 6 moved closer to achieving IOC on Typhoon following OpEval testing in the Hebrides



Ranges in October. A total of six missile launches were conducted to demonstrate the latest upgrades to this highly-capable missile system.

And finally, Brimstone 3A completed its second set of surface-to-surface test firings at the Vidsel range in Sweden. The three launches successfully engaged static and moving targets in a variety of modes.

Mark Dannatt, DE&S Head of Complex Weapons Delivery, said: "2021 was another challenging year for missile system delivery and not without its setbacks. However, working with our industrial partners MBDA and Thales, significant and tangible progress has been made in delivery to UK Armed Forces."

"Whether this be in land, sea or air environments, defence is benefitting from the introduction of new capability and upgrades, as well as in-service support of existing systems, some of which have seen active service in operational theatres."

Working with our industrial partners MBDA and Thales, significant and tangible progress has been made in delivery to UK Armed Forces

NEWS

# Sky Sabre air defence system to British Army

**Sky Sabre has been delivered by DE&S to the Royal Artillery (RA) and is propelling the British Army to the forefront of ground-based air defence technology.**

The totally integrated system has been accepted into the RA arsenal, providing a step change in the force's medium-range capability and, with it, unprecedented speed, accuracy, precision and target acquisition.

The new system is replacing Rapier, which recently entered its fifth decade of operation with UK Armed Forces.

Sky Sabre – operated by 16 Regiment Royal Artillery, part of 7 Air Defence Group – is based at Baker Barracks on Thorney Island, West Sussex. The regiment is rolling out an extensive training package to transition from Rapier.



## Delivering Sky Sabre has been a complex, collaborative endeavour

Major Tim Oakes, Senior Training Officer for the training programme, said: "Sky Sabre is so accurate and agile that it is capable of hitting a tennis ball-sized object travelling at the speed of sound. In fact, it can control the flight of 24 missiles simultaneously whilst in flight, guiding them to intercept 24 separate targets. It is an amazing capability."

Sky Sabre is composed of three main elements: Surface to Air Missile Centre (SAMOC) command and control – the 'brain'; Giraffe Agile Mutlibeam (GAMB) radar – the sensor; and the Land Ceptor launcher and missile.

Rafael is responsible for supplying the SAMOC. SAAB supply the GAMB, which is already in-service with 49 Battery 7 Air Defence Group, and MBDA supply Land Ceptor through their long-term enabling contract with MOD.

Dr Simon Dakin, DE&S Director Integrated Battlespace Operating Centre, said: "I am very proud that DE&S has played such a key role in delivering this world-class networked air defence capability to the British Army."

"Delivering Sky Sabre has been a complex, collaborative endeavour, working closely with the Army, Royal Air Force and weapons teams, together with international industrial partners – a great team achievement."

16 Regiment Royal Artillery is now accepting into service the first tranche of this significant upgrade in the UK's ability to defend itself from the air. Sky Sabre can be configured to operate in all parts of the globe, meaning it can be expected to see service world-wide, much like predecessor Rapier which will gradually be phased out of service

The Commanding Officer of 16 Regiment Royal Artillery, Lieutenant Colonel Chris Lane, said: "We will be able to compete with our peers and take on some of the toughest adversaries. It gives us a capability we have not had before; this new missile system with its new launcher and world-class radar will absolutely put us at the forefront of ground-based air defence."

Sky Sabre is so accurate and agile that it is capable of hitting a tennis ball sized object travelling at the speed of sound



NEWS

NEWS

## FEATURE

# DE&S Air Domain is flying high

**The DE&S Air Domain had a hugely productive 2021, collaborating with its partners in industry and the Front Line to drive improvements.**

Vice Admiral Rick Thompson, DE&S Director General Air, said: "I was delighted to share with the DE&S Board some of the exemplary work our people have been doing to support the Front Line, enabling many notable national successes such as Op PITTING and Carrier Strike Group 21. The Air Domain always delivers, and 2021 was no exception. I was particularly pleased with the success of our partnerships with industry, our customers and other nations in delivering over £4Bn of equipment and support and laying foundations for future success through agility, pace, innovation and teamwork".

Here, Desider highlights how the DE&S Air Domain have demonstrated agility, responsiveness and innovation, also supporting delivery of the DE&S Strategy 2025.

**Delivering pace and agility for our clients: Evolving to future threats**

The Remotely Piloted Air Systems Team has advanced the joint Services TIQUILA programme, which will deliver Mini Un-crewed Air Systems for the UK. The Team aims to integrate emerging technologies to generic platforms, using an innovative commercial framework and a wide supplier-base to counter rapidly emerging threats.

The UK's fleet of Shadow aircraft have recently received additional investment of £110M to increase the fleet size and upgrade the aircraft with advanced technologies. Shadow continues to deliver support to operations, with the Air Support Team now working towards delivery of the aircraft's Initial and Full Operating Capability.

The Air Platform Systems (APS) Team continues to roll-out IFF Mode 5 - a critical system which enables platforms to identify "Friend or Foe". Mode 5 is used in all three Domains, with APS having already configured 160 land, sea, and air platforms, out of 375 in scope. In 2021, over 70 platforms were given Mode 5 capability.

APS also introduced the Multi-Domain Mission Support System in 2021, which provides Situational Awareness and communications interoperability to support operational analysis and decision-making at the operational and tactical level. A new 5-year support contract has been let with Thales UK.

**Delivering pace and agility for our clients: Resourcing client priorities**

Last year the P-8A Poseidon Maritime Patrol Aircraft programme made the significant transition from acquisition to the in-service phase. As well as delivering the last aircraft, DE&S managed the procurement of a state-of-the-art support facility called the 'Atlantic Building' at RAF Lossiemouth. In 2022, the team will be establishing a UK-based training service.

The E-7 Wedgetail programme has made huge progress. "Modification of the first two aircraft has progressed at Birmingham Airport, with contracts placed for the second tranche of mission support equipment, initial long-lead spares, and design and infrastructure requirements for RAF Lossiemouth agreed," said Group Captain Si Young, E-7 Team Leader. "Work on certification, safety, sustainment, security and systems integration has also progressed".

The Voyager Delivery Team provided flight clearances for tanker aircraft to operate with sustainable aviation fuel, part of our environmental strategy to support Net Zero 50.

**Ensuring value to the taxpayer and society**

The Air Domain continues to deliver efficiencies across its portfolio of programmes and is on track to save £30M within this financial year and £300M over the next decade.

**Accelerating digital solutions**

Synthetic-based training is a key requirement of the UK Military Flight Training System, and last year DE&S procured a new static flight simulator and nine Texan mission planning systems for the programme. In addition, the Lightning Delivery Team supported the world's first deployment of two Deployed Mission Rehearsal Trainers aboard HMS Queen Elizabeth for CSG 21.

Innovation sits at the very heart of the Air Domain, particularly with the UK's next generation combat capabilities. Group Captain Mark Butterworth, Dep Head Catalyst, said: "In 2021, the Combat Air Strategy Team - now rebranded as the Catalyst - placed a contract to start the Future Combat Air System (FCAS) Acquisition Programme's Concept and Assessment phase. This includes putting the programme on a 'digital first' footing to accelerate design and testing reducing costs, time and environmental impact. In line with the DE&S Strategy, in 2022 Catalyst is aiming to establish a Digital Aviation Centre of Expertise to understand where digital tools and techniques can deliver transformation across Defence aviation."

Digital innovation is not reserved for new capabilities. The Battle of Britain Memorial Flight team has an ongoing project to digitise the original aircraft manuals from 1940 for the iconic Spitfire and Lancaster to preserve these invaluable heritage aircraft.

**Delivery through our partners**

The Airseeker surveillance aircraft continues to be regularly updated to counter new and emerging threats. "This is made possible thanks to the UK's unique position on the Rivet Joint programme, which relies on close cooperation with our partners for the benefit of all," explained Bill Chrispin, Dep Head Programmes (Airseeker) "Out of a global fleet of 20 aircraft, three belong to the UK and 17 belong to the United States Air Force. All 20 aircraft are supported through a single cooperative programme with common contracts. As an active partner in this programme, the UK can share in technologies that might benefit both the UK and USAF and bring to bear the UK's support knowledge". Last year, the Cooperative Programme was extended out to 2035.



## NEWS

# World-class mine hunting demonstrator delivered to Royal Navy

**DE&S has helped ensure a cutting-edge autonomous system, able to detect modern sea mine threats and reduce risk to life, has been delivered to the Royal Navy.**

The delivery of this mine-hunting demonstrator has been made possible under the joint Maritime Mine Counter Measures (MMCM) programme between the UK and France. France has also received a demonstrator system.

Now in the hands of the Royal Navy, the system, which comprises an uncrewed surface vessel, towed sonar and a portable operation centre, is commencing rigorous capability development trials.

The demonstrator has officially been handed over to the Royal Navy in Plymouth by staff from DE&S, Thales UK and OCCAR.

Andy Lapsley, DE&S Mine Hunting Capability team leader, said: "I am incredibly proud of all of the dedicated team members, both current and previous, who have worked collaboratively with their counterparts from France, OCCAR and Industry to make this happen.

"This world-class equipment is now in the hands of the Royal Navy, who have just begun the complex activity required to fully exploit its cutting-edge performance."

Sea mines constitute a growing threat and users of the system will be able to detect and neutralise mines from miles away, ensuring they can keep vital sea lanes open, with much-reduced risk to ships and the lives of sailors.

Commodore Steve Prest Royal Navy, Deputy Director Navy Acquisition, said: "It is exciting to see the first delivery to the Royal Navy from the MMCM project. The future of mine warfare is here: the Royal Navy's Mine Hunting Capability programme is real; it's happening; it's delivering. We have a lot to learn about this transformational approach to mine warfare, but there is much, much more to come."

The demonstrator will enter an Operational Evaluation alongside further MMCM systems being delivered through a £184-million UK MOD investment agreed last year, which is supporting around 215 jobs in the UK.

As well as at Thales UK sites in Somerset and Plymouth, jobs are also sustained in the wider supply chain at L3 Harris in Portsmouth, Stonehaven in Aberdeen and Alba Ultrasound in Glasgow.

Vice Admiral Chris Gardner, DE&S Director General Ships, said: "The delivery of the MMCM demonstrator systems to the UK and France is an important milestone for the programme. This is a powerful example of how the joint commitment of the two Nations to work together under the auspices of the 2010 Lancaster House agreement can deliver world-class equipment for our Armed Forces."

Eventually, the new mine-hunting capabilities are designed to replace crewed Mine Counter-Measure Vessels, such as the Royal Navy's Hunt and Sandown class ships, with autonomous systems.

This is a powerful example of how the joint commitment of the two Nations to work together under the auspices of the 2010 Lancaster House agreement can deliver world-class equipment for our Armed Forces.



## NEWS

# £460-Million Military Logistics Contract

expected to deliver £54m in efficiency savings



**Defence cannot mount or sustain operations without logistics information. This crucial capability will make our Armed Forces more agile and better placed to support future cutting-edge equipment**

A logistics system critical to UK Armed Forces operations around the world will be supported under a new five-year, £460-million contract with Boeing Defence UK.

The contract supports implementation of the Integrated Review and Defence Command Paper, published last year, which placed an emphasis on more productive, active and globally deployed Armed Forces.

Logistics Information Systems (LogIS) support vital services including inventory, transport, engineering and general ledger management, ensuring the UK can successfully deploy military personnel and equipment globally.

Supporting the Ministry of Defence's ongoing Modernising Defence Programme, this new contract will ensure all single services have access to a single technology-enabled system to support essential inventory services, covering everything from washers and bolts to replacement parts for nuclear missiles.

Around 300 jobs will be sustained at Boeing Defence UK's Milton Keynes and Bristol sites, as well as a further 375 roles in the wider UK supply chain including IBM, Fujitsu, Sopra Steria and BAE Systems.

Director Support Transformation at UK Strategic Command, Air Vice Marshal Richard Hill, said:

"Securing this contract will provide the means to deliver and modernise Logistic Information Systems

(LogIS). This in turn will enable our transformation programme by integrating with industry partners to deliver Support Advantage."

Head of Support Chain Information Systems at DE&S, Dave Penlington said:

"Defence cannot mount or sustain operations without logistics information. This crucial capability will make our Armed Forces more agile and better placed to support future cutting-edge equipment.

"I am delighted that the team's hard work alongside industry has ensured the UK Armed Forces have the tools they need to do their jobs effectively."

Safeguarding the UK's ability to provide critical defence, security and resilience, the contract enables the management of current and future equipment through ongoing access to cutting-edge software applications that are maintained and updated in line with the changing needs of Defence.

Minister for Defence Procurement, Jeremy Quin said:

"This contract helps ensure our Armed Forces can rapidly deploy personnel and equipment on operations at home and abroad whenever required, maintaining their reputation as one of the finest fighting forces in the world."

Negotiated by DE&S, the £460-million contract is being delivered three months early and is expected to save £54 million over the five years.

## DECISIVENESS THROUGH DATA



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- Supports the UK Royal Navy's participation in the NATO Response Force

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NEWS

# News in Brief

## Friend or Foe?

**Members of the DE&S Air Platform Systems (APS) delivery team recently returned from the United States, where they tested the new Mode 5 Identification Friend or Foe system.**

The military and civilian engineers were taking part in Exercise BOLD QUEST - an annual multinational event that allows participants to test capabilities in a realistic operational environment. By assessing new systems with partner nations, DE&S can ensure these systems are interoperable, reliable, and meet the challenges of practical use.

When used in theatre, Mode 5 helps operators establish whether another platform, such as an aircraft or ship, is friend or foe. This critical information will help reduce the risk of fratricide in future operations.

Mode 5 is now a requirement for all NATO coalition operations, making it essential to test the system during realistic exercises. For Exercise BOLD QUEST - which took place at Camp Atterbury, Indiana - the team used deployable transponders which is cheaper and easier than using operational platforms.



## Modernising the protected mobility fleet.

UK MOD and Army staff recently attended the Protected Mobility Fleet Innovation Day at Mira Technology Institute, hosted by NP Aerospace, engineering authority for the Protected Mobility Engineering & Technical Support (PMETS) contract, and industry partners. The event included off-road demonstrations and presentations designed to showcase how the protected mobility fleet of 2,200 vehicles could be sustained and enhanced with new technologies now and into the future.

Highlights of the day included a Wolfhound vehicle being driven autonomously and demonstrations of the Ridgback off-road vehicle. Teams from General Dynamics and Supacat presented new platform innovations and there were showcases from HORIBA-Mira, ITS, Texelis and QinetiQ covering technologies such as hybrid drive and surveillance systems.

Colonel Paul Cummings, DE&S Acting Head Vehicle Support Team, said: "Innovation is a cornerstone when developing new capabilities for defence. In order to equip and support our future forces, we must drive innovation to ensure we stay both ahead of the curve and our adversaries. This innovation day was an

opportunity to see first-hand how industry is collaborating with DE&S, seeking inventive and battle winning capabilities for the future, whilst also keeping in mind our commitment to becoming a greener entity."

James Kempston, CEO, NP Aerospace, commented: "One of the highlights of the PMETS contract is the importance placed on innovation and modernisation of the protected mobility fleet innovative ideas turn into real projects, enhancing

and extending the fleet's working life by creating better, safer, more reliable, capable and environmentally conscious vehicles. The Innovation Day provided an excellent environment for trialling ideas with key stakeholders, promoting collaborative discussions which will ultimately help shape the future of combat-proven vehicles and how they fit into the integrated strategy of the UK MOD."



## Night Vision Goggles delivered to the British Army

**In collaboration with Elbit Systems UK, DE&S has delivered the first tranche of XACT Night Vision Goggles to the British Army.**

Following First Article Inspections conducted by DE&S, the initial consignment of XACT systems was manufactured at Elbit Systems UK's facility in Kent. The systems have been delivered from to the Army for operational use with a lead time of only six months, demonstrating DE&S' and Elbit's agility and ability to respond swiftly to the needs of the UK Armed Forces.

The systems form part of an initial order to be fulfilled over the coming months, with the option for additional follow-on orders over a period of five years.

Stephen Morgan from the Dismounted Close Combat team, part of Land Equipment's Soldier, Training & Special Programmes team, said: "The delivery of this significant technology upgrade to Army night vision is an exciting step forward in the programme and has only been possible through a truly collaborative relationship between the delivery team, the Army and industry."

The lightweight micro binocular Night Vision Goggles have been supplied in a helmet-mounted configuration, with size, weight and improved capabilities. The systems will allow troops to maximise their mission efficiency in dark conditions and enable them to operate at a tactical level in both dismounted and mounted roles. Products from the XACT family are already in operational use with a number of NATO countries including Germany, the Netherlands and Israel.

Martin Fausset, CEO of Elbit Systems UK, said: "The manufacture and rapid supply of the XACT nv33 NVGs marks another step in our contribution to the UK Armed Forces, and the presence of DE&S at our facility in Kent reflects that. The NVGs have been proven to enhance operational effectiveness of several militaries globally, and Instro's work for the UK Ministry of Defence will continue to create more jobs in the UK, growing the local workforce and enhancing skill development in the region."



## International Recognition for Defence Sector Human Factors Group

Human Factors engineers and scientists in MOD and UK Industry have received a prestigious award from the International Ergonomics Association (IEA), an international federation of fifty-two Human Factors societies and networks across the globe. The IEA has awarded the Defence Sector Group of the UK's Chartered Institute of Ergonomics and Human Factors (CIEHF) their 'Human Factors and Ergonomics Prize.' This is awarded every three years to a group, institution or organisation that has made significant contributions to research and development and/or the application of knowledge in the field of Human Factors.

The CIEHF Defence Sector Group is led by Laird Evans and Steve Harmer, who both work in the Human Factors Integration (HFI) team in the DE&S Directorate of Engineering and Safety. The Defence Sector Group has evolved from a long-established MOD-Industry Human Factors Integration (HFI) Working Group, which has existed for over 30 years. Over the course of its existence this group has played a significant and leading role in shaping current Human Factors policy, processes and standards and their application in the design, development and fielding of some of the UK's most advanced military systems. The Group has also contributed substantially to the conduct of Human Factors research. It was the work of this group that formed the basis of the nomination to the IEA. Laird Evans, DE&S Specialist Fellow, Human Factors Integration, said: "The award is not for us as individuals, although we are delighted and honoured to accept this award on behalf of the Defence Sector Group. The award is really for the UK's defence Human Factors community, past and present."



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NEWS

# RAF Shawbury first to benefit from cutting-edge Air Traffic Management System

**A state-of-the-art solution has been installed at RAF Shawbury under a £1.5Bn contract placed by DE&S that is transforming air traffic management for the UK military.**

Initial Operating Capability (IOC) has been declared as the first total Marshall Air Traffic Management (ATM) Solution at the Shropshire air base – home of the Helicopter Central Flying School.

Variants of this solution will now be rolled out across more than 60 MOD sites in the UK and overseas by 2024, including Cyprus, Gibraltar and the Falkland Islands.

Programme Marshall integrates and supports modern, state-of-the-art equipment with existing infrastructure at MOD airfields across the UK and abroad, to enable safe and resilient military flying operations in support of the RAF, Navy and Army.

Around 300 jobs have been created across the UK since the contract was awarded by DE&S to Aquila Air Traffic Management Services Ltd in 2014 (a joint venture between Thales and National Air Traffic Services) and is expected to save the taxpayer up to £317M over the next 22 years.

Sir Simon Bollom, CEO of DE&S, said: "This is a key milestone in a programme that is vital to front-line capability. It is an excellent example of collaboration between DE&S, the RAF and Industry to provide the Armed Forces with the technology to do their job effectively and safely."

The contract delivers a service provision arrangement which provides improved reliability, supportability, quality of service and cost savings by using Aquila Engineering teams to maintain the equipment. To date service availability levels have been high, including throughout the global pandemic. It includes a £400 million investment in advanced surveillance radars and a wide range of sophisticated equipment such as tower systems, new surveillance / navigation aids and radios.

**A state-of-the-art solution has been installed at RAF Shawbury under a £1.5Bn contract placed by DE&S that is transforming air traffic management for the UK military**



Squadron Leader Steve Leech, Senior Air Traffic Control Officer (SATCO) at RAF Shawbury said: "As the first unit to transition to full operational service, the last year has naturally been both a challenging and exciting period of change. I am immensely proud of my team in turning this advanced equipment into an operational capability."

"Working in ever-closer partnership with Aquila, controllers and duty holders now have a much deeper understanding of the air traffic management surveillance solution than ever before."

New technologies being delivered by Aquila through the Marshall programme include new STAR- NG Primary Radars and new control tower ATM systems featuring TopSky™, a digital air traffic control and management solution, as well as new radios, voice switches and a range of other airfield navigation and approach aids.

An important feature of the Programme Marshall solution is the innovative Wide Area Multilateration (WAM) technology. New to military aviation, WAM is specifically designed to meet the new Mode-S, international Air Traffic Management regulations and offers many advantages over traditional surveillance radars, including a high refresh rate, constant and up to date data and high reliability.

Michael Stoller, CEO of Aquila said: "The full Marshall ATM Solution entering operational service at RAF Shawbury marks the achievement of a major milestone in the Marshall programme. This new technology will transform air traffic management for our military in the UK and overseas and enable our customer to realise significant operational and cost saving benefits."

## PEOPLE

# Gaurang Patadia

**Job title**

F-35 Lightning project planning and scheduling specialist in the Air domain

**What does your role involve?**

When a project starts, we have to prepare the schedule from start to finish. There are lots of teams here who work on different stages of the 'CADMID' cycle for a piece of equipment or technology – that stands for Concept, Assessment, Demonstration, Manufacture, In-Service, and Disposal. I work on the manufacturing stage, so my team prepare the schedule and track progress, ensuring projects stay within their timelines and budgets. We work with project managers, cost control team, finance, industry partners and our customers in the armed forces. We work as a one big team.

**What do you most enjoy about your job?**

The Lightning project is one of the biggest acquisition programmes in the whole of defence. Lightning is a fleet of stealth combat aircraft – it's a new piece of kit and our team is responsible for bringing that kit into service. This is a highly advanced aircraft, and well ahead of its time.

DE&S has also overseen the construction of HMS Queen Elizabeth and HMS Prince of Wales – two aircraft carriers that are the most powerful warships ever built for the Royal Navy, and they house the Lightning aircraft. It's exciting to be a part of, not only because it's high profile but because we're working closely with the Royal Navy and providing a really important piece of equipment for our customers on the front line, to allow them to do their job. It makes me feel really proud.

**What is your greatest accomplishment to date?**

Being part of a DE&S Lightning Team within Combat Air. Its of one of the biggest Acquisition programmes in the whole of MOD and I manage an Order Book Item with total spend in excess of £7 billion across the life span of the project.

**What keeps you energised about working at DE&S?**

What we do here is equipping front line commands with the best kit and tools that they need to do their job, which in turn is ultimately protecting the UK and our people. That feeling of doing something that's important on a really big scale, with that level of impact, is very rewarding.

**Who or what has shaped who you are?**

It's my belief system. I believe that you are responsible for your actions, be it at home, within the society or in your career. The buck stops with you no matter what. You can either have an excuse or a result.

**What do you enjoy doing in your spare time?**

In my spare time I love playing with my two boys who are eight and six years old. We enjoy playing Nintendo Switch, going for long walks and watching action thriller movies.

**What might surprise people about you?**

I love to participate in adrenaline rushing charity causes which includes skydiving and bungee jumping. I have done skydiving a few times for charity and leisure. I've jumped twice from the rooftop of the tallest building in Bristol for charity causes and raised in excess of £500.

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

Your thoughts become things.



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