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of Defence

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desider

Issue 148
December 2020

*the magazine for
defence equipment
and support*

**DE&S innovates with world-class
autonomous minehunting systems
for UK and French navies**



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Foreword

By Sir Simon Bollom, CEO



As 2020 comes to a close, I would like to say thank you to everyone across DE&S and Defence for the way you have responded to the varied challenges over the course of the year and for playing such a critical role in the delivery of government priorities.

I remain immensely proud of how we have adapted to ensure continued focus on delivering for our military customers during the most difficult circumstances, while also supporting the national response to COVID-19. Your agility, creativity and resilience are admirable and I hope you come back in the new year recharged and energised for whatever challenges and opportunities come our way.

DE&S plays a vital role in supporting the armed forces in order to defend our nation and the Government's recent commitment to invest £16.5-billion over four years in Defence is welcomed. This is a good settlement in the current climate and will help our armed forces modernise and innovate in response to both current and future threats. It also recognises the key role Defence and therefore DE&S has in delivering UK prosperity as well as security.

There are also substantial challenges in the detail of the settlement which will require hard work, intellect and determination to counter. However, I am confident that we can rise to the challenges ahead, harness our diverse and specialist skillsets and work alongside our customers and industry partners to ensure we deliver the most efficient and effective support to our armed forces.

This year we have provided significant support to our front-line commands delivering cutting-edge equipment for use across the world. This Autumn we saw kit, procured by DE&S, on Exercise Joint Warrior and Exercise Crimson Warrior

alongside other NATO allies. These multinational exercises allow participating units to hone their specialist roles and help foster vital links between the UK, NATO and other allied militaries. You can read more about these major military exercises in this edition.

I was delighted to hear recently that the team behind the delivery of HMS Prince of Wales and completion of the Queen Elizabeth Carrier programme won the coveted APM Project Management Award for Engineering, Construction and Infrastructure Project of the Year award. It recognises the thousands of people who have worked on this programme and is testament to the commitment and professionalism of all of those involved – very well done.





It also gives me a sense of great pride to hear that the MOD Technical Assurance team won an International Quality award for the work they did to ensure the PPE procured for the UK to support the COVID-19 pandemic met stringent regulations. The award, a first for DE&S, recognises the contribution of our quality professionals as one of the best across the globe.

The Defence community has worked tirelessly to deliver for the nation in a time of unprecedented challenge and we continue to do so in towns and cities across the country, and around the world.

Thank you all for your hard work and dedication to keep the nation safe and prosperous.

— “ —
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— ” —

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Printing

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On the cover

Image shows World-class automated minehunting systems off of the coast of Tregantle.

Credit: Charlie Perham



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Annual Act of Remembrance

Danny Griffiths, Director HR, talks to Desider about supporting COVID-19 efforts, future ways of working and the challenges ahead for DE&S.



As Director HR, there's rarely a quiet moment in the calendar and this has never been more true than during 2020.

For DE&S, our customers and industry alike, the last nine months have fundamentally changed the way we work, our productivity and our reliance on digital technologies to get the job done. For many, it's meant juggling our personal and work lives, which have become increasingly blurred.

Maintaining a focus on the health and wellbeing of ourselves, our families and colleagues has never been more important. Not just to ensure COVID-19 is kept at bay, but to ensure we take breaks during the working day, take annual leave and check in with others to keep connected.

I've felt an immense sense of pride in our people during the COVID-19 pandemic. They've continued to support not only our traditional front-line customers, but also wider Government and played a big part in supporting our communities. From helping to establish the Nightingale Hospital at the University of the West of England, to supporting the NHS and sourcing PPE and ventilators, DE&S people are amazing!

In the early days of the crisis, I was concerned with how we could

support them. My HR team has been very active in everything from ensuring the early payment of last year's pay award (we didn't know how badly families would be impacted and doing our bit to financially support was important) to driving clear messaging on managing colleagues' concerns in a period of unprecedented change.

We've all had to adapt our ways of working, from social distancing and increased safety measures on site to working from home. Although we're missing the social interaction, I've noticed a positive effect in our behaviours. The way we're watching out for each other, becoming more tolerant and recognising the difficulties in striking a balance between juggling work and family commitments is driving a stronger team ethos.

I want to ensure that in five years, DE&S is fit for the future. During recent staff engagement sessions, the key concerns were how we operate in future and our vision for life after COVID-19. We need to become an organisation of empowered people with the skills and knowledge required to meet Defence's future needs. How we achieve this will form the basis of our refreshed strategy, which will be published early next year.

As we head into 2021, I've no doubt there'll be further difficult days ahead. We need to look at how we respond to the Integrated Review and ensure we have the capability and skills to rise to any new challenges this throws our way. There'll also be financial challenges and, as the Treasury strives to support many elements of our society, it's never been more important to drive effectiveness, deliver real value and efficiency.

I know there's nothing we cannot overcome together. The pride, professionalism and determination of our people to support our front-line customers is something I've not witnessed anywhere else in my career. I want to do everything I can to not just maintain this, but to make things better - for our people, our customers and Defence. If I can do that, I'll have succeeded.

“
The way we're watching out for each other, becoming more tolerant and recognising the difficulties in striking a balance between juggling work and family commitments is driving a stronger team ethos
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DE&S negotiates contract for production of world-class autonomous minehunting systems for Royal Navy

Following a successful demonstration phase and trials, the UK has invested £184-million in the Maritime Mine Counter Measures (MMCM) programme through a joint production contract with France.

The investment will see around 215 jobs supported in the UK at Thales sites in Templecombe (Somerset) and Plymouth as well as in the wider supply chain including L3 Harris in Portsmouth, Stonehaven in Aberdeen and Alba Ultrasound in Glasgow.

When operational, the new system will give the Royal Navy increased capability to remotely detect and neutralise sea mines. It is designed to potentially replace conventional crewed minehunting vessels, such as the Royal Navy's Hunt and Sandown-class ships, with autonomous systems.

The UK element of the production contract was negotiated by the minehunting Capability (MHC) team at DE&S.

MHC team leader, Barry Miller, said: "We are constantly working with industry to identify innovative equipment that will provide the Royal Navy with

cutting-edge capability. This system is an exciting development and the collaborative working between DE&S, industry, the Royal Navy and our French colleagues is helping make it a reality."

The contract sees the purchase of three sets of equipment. Each set comprises a portable operation centre, an autonomous surface vessel, towed sonar and a mine neutralisation system.

Sea mines constitute a growing threat and users of this 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.

DE&S CEO Sir Simon Bollom said: "This ground-breaking technology brings with it a step-change in capability for the Royal Navy which is a bold step into the digital and autonomous world. I'm incredibly proud of DE&S and the Royal Navy team who have worked tirelessly with our French colleagues to deliver on this contract."

The MMCM programme was set up to deliver cutting-edge minehunting equipment to the navies in the UK and France.

The programme contract will be placed by the Organisation for Joint Armament Co-operation (OCCAR) acting as the Contracting Management Authority on behalf of both nations.

First Sea Lord, Admiral Tony Radakin, said: "I am enormously excited by the potential of the future minehunting capability. This will allow us to deliver minehunting more effectively, more efficiently and more safely, and to integrate even more closely with our French counterparts in this important area."

The first equipment is due to be delivered in late 2022. It will commence operational evaluation prior to entering service with the Royal Navy.

“
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First Sea Lord Admiral Tony Radakin





Progress for Boxer

Work on Boxer continues at pace, despite the challenges of COVID-19 and curtailed international travel. In less than a year, the programme has seen significant progress, most notably the recent approval of the first part of the critical design review for the hull structures with industry partners Krauss-Maffei Wegmann and Rheinmetall through the ARTEC joint venture. This follows the approval of the preliminary design review which was carried under the direction of Organisation for Joint Armaments Co-operation (OCCAR) and UK MOD in September.

These key milestones pave the way for the next step in developing the British Boxer prototypes which will include the full critical design review of the vehicle which is expected in Spring 2021. Much of the fleet is planned to be built by British-based companies RBSL and WFEL who are based in Telford and Stockport respectively, with the work expected to create around 120 new jobs at WFEL, a further 200 jobs at RBSL, as well as hundreds of other jobs expected to be created or sustained through a nationwide supply chain.

Sea Venom missile completes qualification firings trials

MBDA, which is developing the weapons system procured by DE&S for use on the Royal Navy's AW159 Wildcat helicopters, achieved the milestone at the DGA Essais de missiles test site near Ile du Levant, off the south coast of France.

This is the first programme to take full advantage of the cross-border centres of excellence on missile technologies launched by the Lancaster House treaty between the UK and France, which celebrated its 10-year anniversary this month.

The final qualification trial tested Sea Venom's advanced target discrimination within a complex and cluttered naval scenario, resulting in a successful strike of a target at sea.

Colonel Martin French, DE&S'

Lightweight and Medium Attack Systems (LMAS) team leader, said: "The excellent results from live Qualification Firing Two (QF2) represents a major milestone towards the introduction into service of the Sea Venom weapon system for the Royal Navy. This is part of the incremental delivery of the capability, starting with delivery of missiles to deploy on Carrier Strike Group's maiden deployment next year."

Replacing Sea Skua, it is being designed to safely engage hostile vessels amongst civilian ones and could be used on a range of targets from small, fast-moving craft through to larger ships.

The Sea Venom programme has seen about 200 highly-skilled jobs sustained at MBDA in Bristol, Bolton and Stevenage.



DE&S staff help land MOD's first ever International Quality Award

DE&S staff who formed part of a team helping the government ensure PPE being procured during the fight against COVID-19 met stringent regulations have been recognised.

The DE&S MOD Technical Assurance team comprised 24 DE&S Defence Quality Assurance Field Force (DQA-FF) Government Quality Assurance Representatives (GQAR) and a further 42 NHS staff.

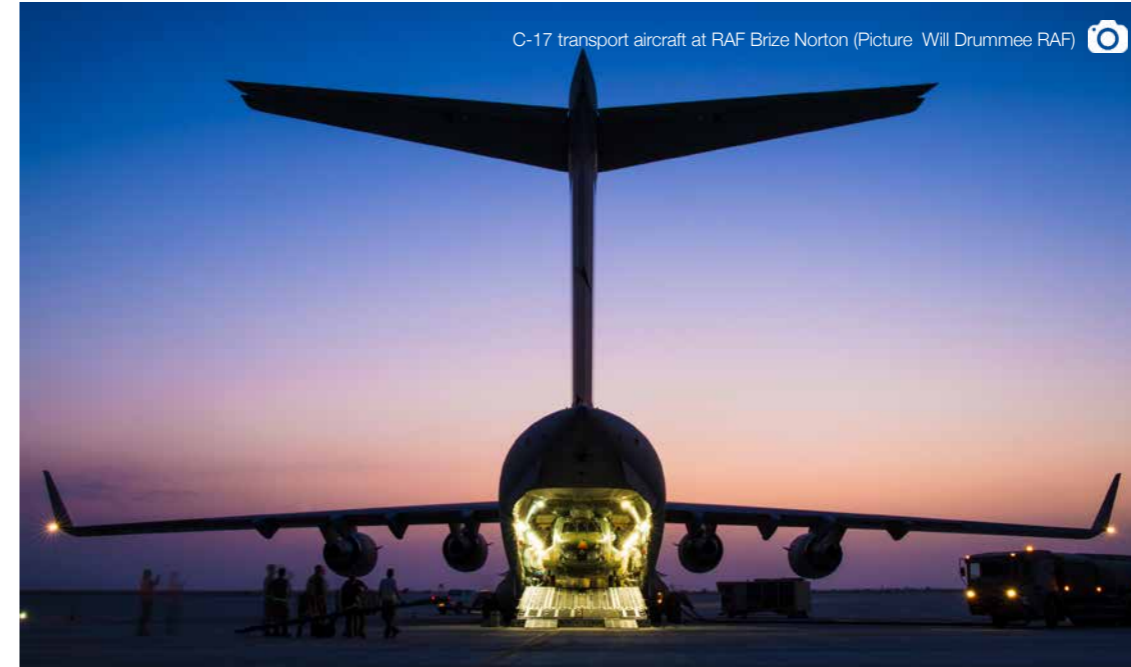
Established in early April, the team evaluated more than 7,000 supplier submissions to ensure technical standards and EU Regulations were being met for a range of PPE and Medical Devices for front line healthcare professionals.

It is the first time that a team has won an International Quality Award, which are designed to recognise and reward the contribution of quality professionals, teams and entire organisations across the globe.

The achievement of the DE&S MOD Technical Assurance team is yet another landmark having also won three MOD Quality Awards for; Best Improvement, Inspiring Leadership and Rising Star.

DE&S' David Moore, who headed up the MOD Technical Assurance team, said:

"This award is much-appreciated recognition of a team that has worked tirelessly to support the NHS front line. I was lucky to be part of a group of exceptional staff whose dedication to their task ensured that billions of items of PPE got to where it was needed most."



DE&S awards C-17 maintenance contract

DE&S has signed a £2.6-million maintenance contract for the Royal Air Force's C-17 aircraft, which will create 25 industry jobs at RAF Brize Norton.

Increasing maintenance support will help improve the overall availability of C-17 aircraft for the RAF, while allowing

99 Squadron to perform other important tasks.

DE&S delivered the one-year contract with Boeing through the C-17 Globemaster Integrated Sustainment Program (GISP) Foreign Military Sales (FMS) case with the US Government. This was a Strategic Milestone that the

Delivery Team delivered three months early.

Boeing is recruiting high calibre candidates, who are receiving C-17 maintenance training after the contract commenced on 30 Oct 2020. As C-17 maintenance is an enduring requirement, it is expected that

HMS Forth visits Gateway to Antarctica

The wildlife paradise of South Georgia - 850 miles from HMS Forth's normal stomping ground of the Falklands - is one the UK's most remote overseas territories.

Offshore Patrol Vessel HMS Forth, procured by DE&S for the Royal Navy, patrols around the Falklands providing support to the Island authorities and Britain's South Atlantic territories. Several times a year Forth and her crew head to South Georgia to practice dealing with floods, general damage control and machinery breakdowns.

For the first time, Forth was able to berth at the newly-completed wharf in the island's 'capital' Grytviken, as traditionally, visiting Royal Navy warships have anchored in the entrance to the harbour.

The new jetty next to the British Antarctic Survey research base at King Edward Point allowed all aboard to get ashore and explore, meeting South Georgia's rich wildlife including elephant and fur seals, king penguins and albatrosses.



the 25 jobs will be subsumed into the overarching support contract from 2021 onwards.

Boeing already provides in-country support to the RAF's eight C-17 aircraft, which includes assisting the squadron, preventative maintenance and local periodic maintenance carried out in the UK. This is in addition to more extensive maintenance which is done around once every five years at Boeing in San Antonio, Texas, USA.

Darren Astall, DE&S C-17 Delivery Team Leader, said: "This new contract creates 25 skilled jobs and ensures the UK's C-17 aircraft will continue to be maintained by highly experienced technicians. This is great news for the prosperity of RAF Brize Norton and the surrounding Oxfordshire area. It is also a great example of how we work closely with industry to deliver specialised support to our customer, the RAF, while creating valuable job opportunities."

Darren added: "A C-17 Availability Report recently concluded that additional contractor support was required, so I am delighted we are now meeting the enduring needs of our customer with this arrangement."

DE&S join forces for Exercise Joint Warrior

DE&S Air, Land and Ships domains have been working side by side to support some of the biggest and most complex military exercises in Europe involving the Royal Air Force, the Royal Navy and the British Army as well as NATO and allied forces.

This massive multinational exercise allowed participating units to hone their specialist roles within a larger war-style setting and help foster vital links between the UK, NATO and other allied militaries.

Held off the West coast of Scotland, the exercise featured 11 nations and combined an overall contribution of more than 6,000 personnel, 81 aircraft, 28 ships and two submarines, taking part to assure maximum preparedness in the face of any threat.

The Royal Navy's largest warship, HMS Queen Elizabeth, took her place at the heart of a UK-led NATO Carrier Strike Group (CSG) – the most powerful UK maritime force seen in Europe for almost 20 years.

Five F-35B Lightning jets from the RAF's 617 Squadron and 10 F-35Bs from the US Marines Corps' Marine Fighter Attack-211 Squadron embarked on the 65,000-tonne carrier in what was the largest concentration of fighter jets to operate at sea from a Royal Navy carrier since HMS Hermes in 1983.

The F-35s were joined on the deck by eight UK Merlin

helicopters and two UK Wildcat helicopters, with pilots and ground crew able to conduct vital training from the carrier.

Peter Davidson, head of sustainment operations for the Lightning delivery team (LDT), said: "Exercise Joint Warrior allowed personnel from the UK and US to train together ahead of the first operational deployment in 2021. The outputs from across DE&S were critical to the success of this latest group exercise."

Embarkation of Lightning aircraft required a high degree of preparation by the deploying squadron. The LDT supported with engineering activities, contractor depth maintenance and the provision of spare parts through the Lightning Global Sustainment Solution.

Squadron Leader Tim Frogley, LDT supply chain lead, said: "It has been some time since UK military jets embarked on a UK carrier. Exercise Joint Warrior provided a vital dress-rehearsal to allow supply chain process and spares support to be tested ahead of next year's deployment. Then, there will be additional challenges of resupplying the aircraft at significant range. This will involve a mixture of contracted and military logisticians, including resupply by helicopter. These processes were successfully tested throughout the exercise."

The CSG includes the Navy's Type 45s HMS Diamond and



HMS Defender as well as Type 23 frigates HMS Northumberland and HMS Kent. All the vessels in the task group not only protect the Queen Elizabeth-class carriers from hostile ships, submarines and aircraft in the various scenarios, but are also capable of conducting a range of supporting missions. Also, the two Royal Fleet Auxiliary ships, RFA Tideforce and RFA Fort Victoria, provide replenishment of fuel, food, spares and ammunition to enable sustained operations both at, and from, the sea.

DE&S Director General Ships, Vice Admiral Chris Gardner, said: "The pride shown in seeing the collective efforts being put into action was palpable. The mantle is now firmly with our DE&S support teams. There will be lessons learnt for how we sustain the group in the future, and this will inform the planning teams for next year's global deployment of HMS Queen Elizabeth and her task group."

The exercise saw two Wildcat helicopters from 847 Naval Air Squadron (NAS) make history by guiding F-35B Lightning II bombing runs for the first time over Garvie Island, a rocky outcrop off Cape Wrath at the north-west tip of Scotland.

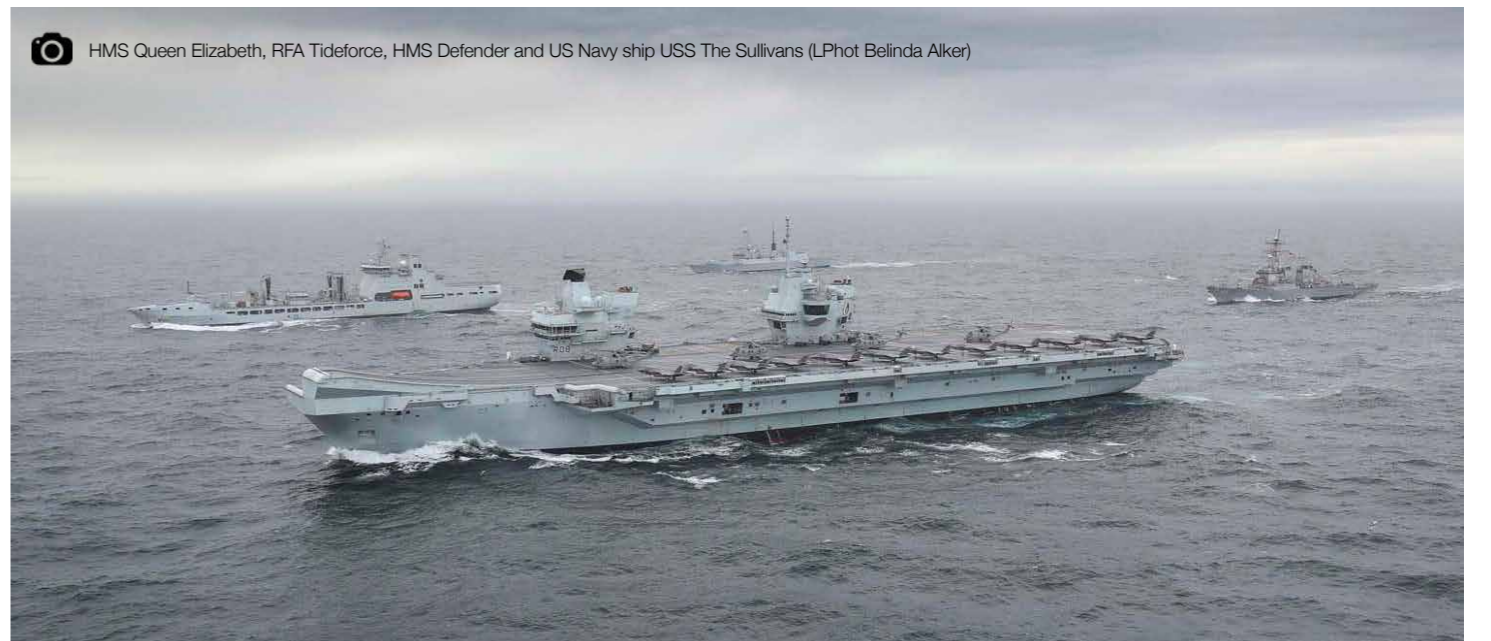
820 NAS achieved more than 100 hours' flying during the exercise, almost half of which was in support of the Task Group (TG) anti-submarine effort from a threat posed by a diesel electric submarine. 820 NAS was also tasked with protecting the TG from multiple enemy warships, providing real-time intelligence to all the Principle Warfare Commanders.

In order to protect all armed forces personnel and contractors, a wide range of mitigations measures were introduced to reduce the risks posed by COVID-19. Michelle Casey, LDT sustainment technical thoughlife support lead, said: "We deployed industry supply chain managers and IT and air vehicle specialists to HMS Queen Elizabeth. They all had to be tested for COVID-19 and, if they tested negative, entered into a two-week quarantined deployment bubble at RAF Marham. This needed a high level of co-ordination and we learned a lot regarding what impact COVID-19 has on deployment planning and implementation."

Following this exercise, UK forces took part in another exercise called Crimson Warrior – the largest and most complex exercise the RAF has run in a decade. Personnel and more than 70 aircraft from the RAF, Navy, Army, US Marine Corps and US Air Force took part. Fast jets, multi-engine aircraft, helicopters and remotely piloted air systems operated from stations across the country.

The exercise was a development of the regular Cobra Warrior exercises, widely regarded as the most challenging training for aircrew and the final step for those seeking to qualify in their fields.

Crimson Warrior included land-based training scenarios for the F-35B Lightning aircraft and helicopters that will form the CSG Air Wing for next year's operational deployment of HMS Queen Elizabeth.



Next-generation Starter Bomb Disposal robots delivered to the British Army

The latest batch of Starter robots have been delivered to the British Army, taking the total number in service to 100. The robots have been delivered as part of an £89-million contract to equip defence with 122 state-of-the-art remote-controlled bomb disposal machines by 2021, with the remaining 22 scheduled to be delivered in the new year. The recent deliveries were made to the 11 Explosive Ordnance Disposal and Search (EOD&S) Regiment, which has a national footprint across the UK.

They are replacing two previous heavy remote-controlled vehicles named Cutlass, introduced into domestic Military Aid to the Civil Authorities (MACA) service in 2012, and Wheelbarrow Mk 8b, which have been used on numerous operations, both at home and overseas, since it was introduced into service in 1995.

Starter is equipped with high-definition cameras, lightning-fast datalinks, an adjustable manipulation arm and tough, all-terrain treads. The improved manoeuvrability and mobility provided by Starter's rugged track system also makes it suitable for

rough terrain. Starter's haptic feedback function is designed to allow users to "feel" with human-like dexterity while they operate the robot's arm using the remote-control handgrip. The initial contract was awarded to L3Harris in 2017 to deliver 56 robots for use on contingent operations. The MOD extended the contract in July 2019 for an additional 66 robots for use on MACA operations within the UK, Cyprus and Gibraltar.

Nick Taylor, head of the Soldier Training and Special Programmes team at DE&S, said: "Despite the obvious challenges brought on by the COVID-19 pandemic, which has not only impacted the way we work but also how we physically deliver the equipment, we have remained committed to providing Defence with this vital capability safely and on time."

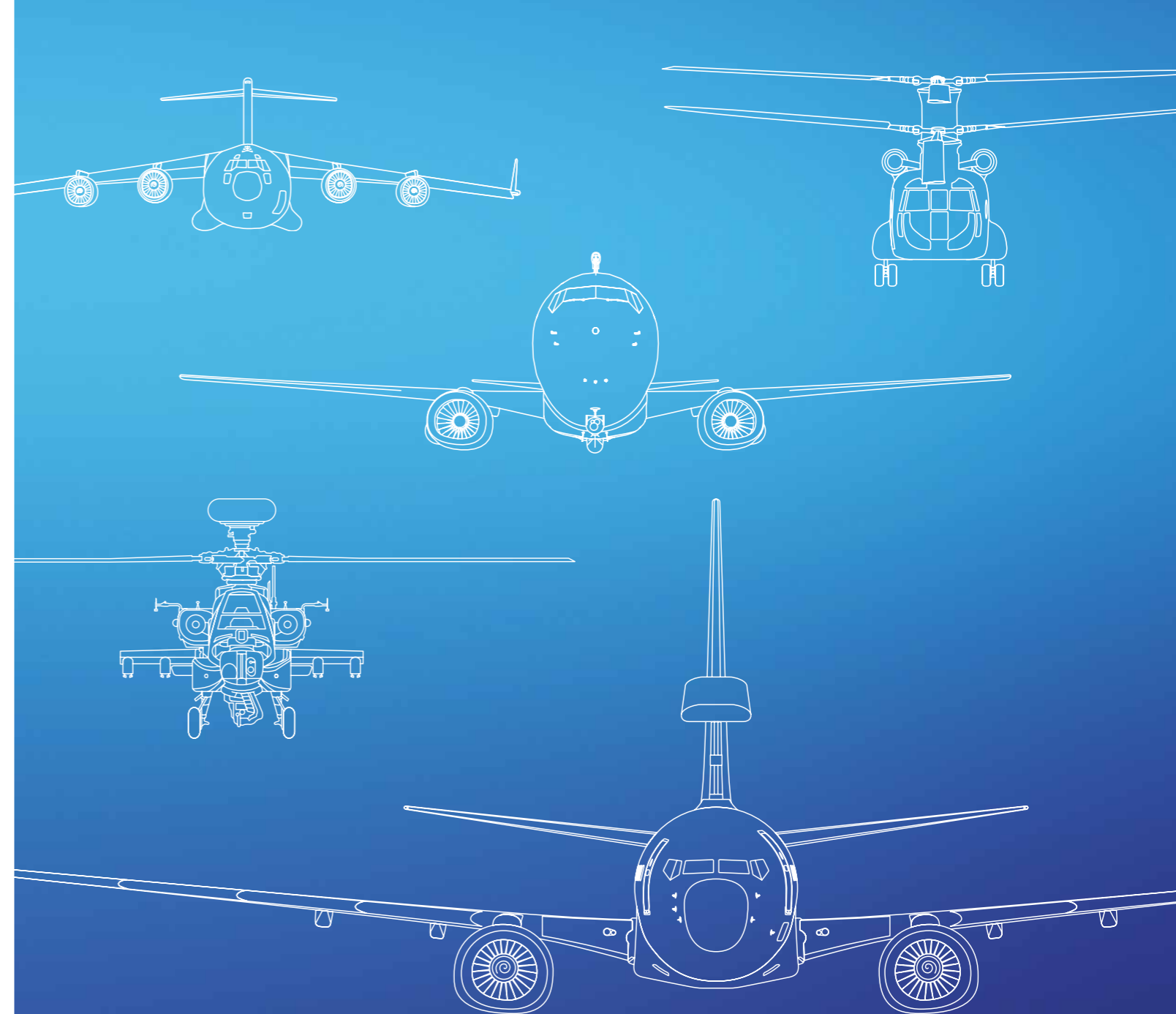
"The project goes from success to success, with the manufacture of Starter by L3Harris being ahead of schedule and the user having such confidence in the system that the full operating capability milestone has been advanced by a full 12 months to the Summer of 2021."

“
We have remained committed to providing Defence with this vital capability safely and on time
”

Nick Taylor, head of the Soldier Training and Special Programmes team



Starter robots in Stores waiting to be deployed to the 11 Explosive Ordnance Disposal and Search (EOD&S) Regiment (Picture submitted)



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With 2,500 domestic employees, 300 suppliers and five of the world's most advanced military platforms in or entering service, Boeing is proud to partner with the United Kingdom in defending our people, here and around the world. Together, we invest in the future of our country and help UK communities prosper.





Pictured: Charlie Hazeldean, head of the Remotely Piloted Air Systems team (Pictures submitted)

On working as a team to deliver complex projects and Ruby the Campervan

Charlie Hazeldean is the head of the Remotely Piloted Air Systems team, setting strategic direction and leading effective collaboration with customers, industry and in DE&S

What does your role involve?

As the head of the Remotely Piloted Air Systems delivery team (RPAS), I am responsible for the acquisition and support of aircraft for customers in Army, Navy, RAF and UK Strategic Command. I lead a team of approximately 200. My role primarily involves leadership of the team, setting strategic direction, prioritising, problem solving, providing support and guidance and generally trying to look after my team and keep everything running as smoothly as possible.

What about your role is exciting, rewarding or interesting?

The technology we deliver and projects that we run are often cutting edge, breaking new ground in delivering capability to our customers. Seeing projects deliver is very exciting, particularly seeing the impact they have, for example the recent deployment of Watchkeeper on Op Devran in the Channel. However, what I find more rewarding is seeing members of the team grow and develop, although this often means they leave the team and move on to other challenges and it is a little sad to see them go.

How important to you is teamwork?

I would always advocate a "One Team" approach, whether that be across functions, with our customers or with industry. My general philosophy is that people come to work to do a good job and I find most people are

trying to achieve the same thing, which is delivery of capability to our armed forces. The projects we run are so complex that a single person has no chance of delivering in isolation and we must work together to achieve our goals. I'm lucky to have a fabulous team.

How are you helping embed change in your area?

My leadership team all have an "extra-curricular" work strand to run. These range from social and charity work, the RPAS Equality Action Committee to continuous improvement. We have a team working group for each work strand to encourage as many of the team as possible to help make RPAS the best place to work. Following a prompt from one of the team we have recently reviewed and renamed the team from the Unmanned Air Systems Delivery Team to the Remotely Piloted Air Systems Delivery Team. This is to reflect both a move away from gendered language in Defence and better alignment with the Military Aviation Authority regulations in this area.

Why did you choose to pursue a career in DE&S?

I joined DE&S mainly by accident. After a short career as a software engineer at an internet start-up I was looking for a more secure job. I had also decided that I was never going to be great at writing software and I was much better at organising things, hence why I moved into project management. I saw an advert for

IT specialists at the MOD and applied. I turned the job down once and then had a re-think and joined in 2004 and have never looked back.

What do you most enjoy about your job?

I really enjoy the buzz of working in a highly motivated and delivery focused team. I really enjoy chatting to different members of the team and finding out more about them and their hidden talents!

What do you enjoy doing in your spare time?

Far too many things, and there is never enough time to do them all. Mostly I spend time outdoors in the mountains with Mr H, Toto the dog and Ruby the campervan. We enjoy a range of outdoor sports including paddleboarding, climbing, outdoor swimming and some fairly extreme skiing.

What might surprise people about you?

I have a degree in Physiology and wanted to be a vet. I practised ballet for many years until foot surgery put me out of action in 2016. I'm also naturally very shy.

Celebrating 40 years of Chinook

One of the armed forces' most iconic aircraft is celebrating 40 years of service.

The Boeing-built Chinook helicopter was first delivered to RAF Odiham on November 22, 1980.

Since the Falklands Conflict in 1982, the versatile and reliable asset has been deployed in every major conflict the UK has been involved in.

It has seen action worldwide, including in Northern Ireland, Bosnia, Kosovo, Sierra Leone, Iraq and Afghanistan, where it conducted a range of missions including the Medical Emergency Reaction Team role by collecting injured personnel from the battlefield.

As the UK armed forces' only heavy-lift helicopter, it has also supported numerous humanitarian missions including the Pakistan earthquake, evacuation of British citizens from Lebanon and disaster relief in the Caribbean.

Along with Puma, Wildcat and Merlin, it was part of the Joint Helicopter Aviation Task Force which transported NHS paramedics, equipment and patients during the peak of the COVID-19 pandemic earlier this year.

Chinooks were also deployed to help with the Whaley Bridge Dam repair and flood defenses in Yorkshire last year and have been actively involved in supporting French forces countering insurgency in Mali.

Wing Commander Mick Hoyle, head of engineering in DE&S' Chinook Delivery Team, has completed numerous tours over a 20-year period with the aircraft.

He said: "I have been lucky enough to have served a number of tours on the platform employed in a variety of roles. I have seen the aircraft on exercise and operations in a wide range of challenging environments, across a wide spectrum of roles over the years.

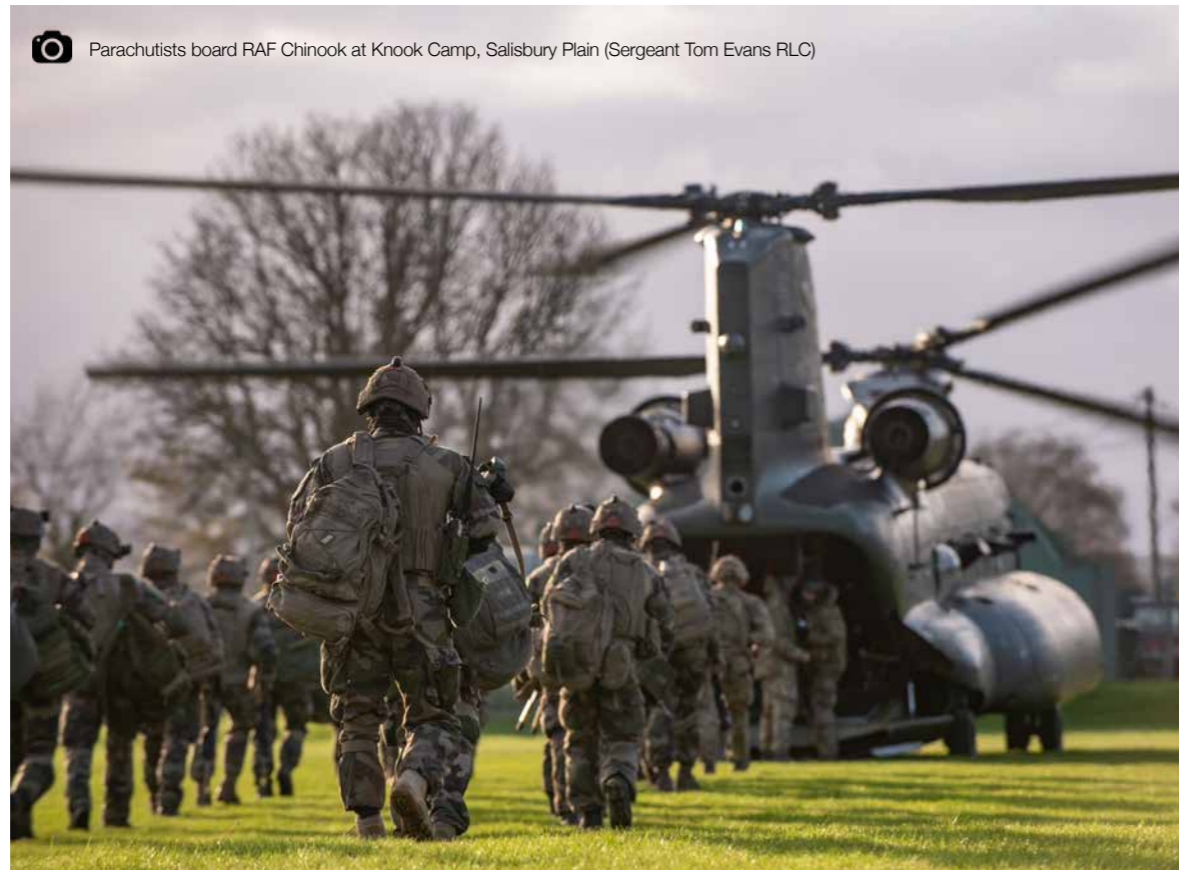
"It is this ability to operate within such a wide range of environments and conditions, coupled with the flexibility and huge workload ability of the aircraft, that are the key attractions to its customers and why the aircraft is, and continues to be, such a valuable asset for UK armed forces.

"However, throughout all my experience on the aircraft the standout quality of those personnel who operate, maintain and support the force is the key ingredient.

"It is their dedication, commitment and determination, regardless of the austerity of the environment or the demands of



Heavy lift capability shown above Central London (Sgt Dave Rose)



Parachutists board RAF Chinook at Knook Camp, Salisbury Plain (Sergeant Tom Evans RLC)



RAF HC Mk 1 Chinooks from 18 Squadron, RAF Gutersloh in West Germany (Boeing)



Chinook (Boeing)



Chinook conducting routine flying training in the Mountain Flying Training Area (Cpl Tim Laurence RAF)

the operational battle-rhythm, that ensures the Chinook will continue to deliver, like no other rotary wing asset can, on and beyond its 40th anniversary in UK service."

The RAF operates a 60-strong Chinook fleet made up of 38 Mk6A, eight Mk5 and 14 Mk6 variants based at RAF Odiham and RAF Benson.

The aircraft is more than 30m long (98ft, 10.5ins) with two 18.29m (60ft) diameter rotors. It can carry up to 55 troops or 10,000kg (22,000lbs) of cargo, reach a maximum speed of 296kph (160kt) and an altitude of 4,572 metres (15,000ft).

One man who has plenty of experience flying this capability is Squadron Leader Doug Fowler, the Chinook Delivery Team's requirements manager who accrued more than 6,000 flying hours across the globe for the RAF.

He said: "Chinook is a battlefield helicopter that is summed up in one word: 'Power'. It's got lots of it and you know when the aircraft is around. It doesn't do things by halves and can take lots of punishment.

"Probably the most rewarding role was as part of the Medical Emergency Response Team (MERT) in Afghanistan, which we established and developed to be the best in the world, saving countless lives.

"Any member of the armed forces who deployed to Afghanistan knew that if they got into trouble we were never far away and would invariably get to them. Chinooks retain a special place for them.

"I feel very proud to see Chinook reach 40 years of UK service, especially bearing in mind it's not done yet and there are a number of aircraft that have entered and retired from service since 1980."

Chinook's first flight was in 1961 and it first entered service in Vietnam. These days, the platform supports more than 450 highly skilled civilian jobs across the UK, with Boeing engineers operating alongside the RAF and DE&S on the front-line fleet, as well as providing depth maintenance and upgrade programmes at Gosport and MOD Boscombe Down.

Several UK-based suppliers, including Leonardo Helicopters, Thales UK and Standard Aero also supply materials, skills and services.

Anna Keeling, managing director of Boeing Defence UK, said: "For 40 years, the Chinook has played a vital role in the UK's defence capability, supporting our people at home and abroad.

"The Chinook is a multi-role helicopter that transports troops, defence equipment and fuel. It is also key to disaster-relief operations at home and overseas and it plays a major role during times of national crisis."

Next-generation workboats delivered to Royal Navy



New Officer Training Boats (ATLAS ELEKTRONIK)

Three next-generation workboats have been delivered to HMS Raleigh ensuring Royal Navy personnel have the latest equipment to train with.

The delivery comes under a £48-million contract that was signed for the production of up to 38 Vahana workboats to assist Royal Navy ships from UK bases and on operations worldwide.

Ranging in length from 11 to 18 metres, the modularity of the design allows these flexible and versatile boats to perform a multitude of tasks to meet the end-user requirements; including officer and diver training, Antarctic exploration and explosive ordnance disposal.

The three 11-metre workboats were delivered to HMS Raleigh's Jupiter Point, allowing the delivery of operator training on twin-waterjet platforms.

Both staff and trainees will benefit from a major uplift in capability in terms of speed, payload, operational area and navigational suites.

Under the contract up to 38 boats are in production, with in-service support being provided beyond final acceptance of the last platform.

The boats will all feature glass-reinforced plastic hulls and advanced twin waterjet propulsion. Despite their varying roles, they

will all have the same steering and control system, reducing the need for training and making them simpler to operate.

Aleks Blackburn, DE&S Vahana Project Engineer, said:

"The Vahana Workboats Contract is set to replace some of the oldest craft in the RN and RFA Fleet, along with providing new Passenger Transfer Boats for the Carriers. These versatile craft will elevate the capability of the Ships and shore establishments they are embarked from and make a big impact on how the Royal Navy and Royal Fleet Auxiliary conduct training, survey, diving and disaster relief operations around the world."

One of the major advantages is that all platforms are highly adaptable to operational demands thanks to their cutting-edge modular design elements. For example, if the Royal Navy wished to quickly redeploy a boat from hydrographic survey duties to support diving for explosive ordnance, the survey module can be quickly lifted out of the boat and replaced with the diving module containing the high-pressure air required for that task.

One of the roles some of the workboats will be used for is transferring personnel to and from both of the UK's carriers. Able to carry up to 36 passengers at one

time, the workboats can be stowed inside the Carriers and winched to and from the water using on-board lifting equipment, allowing them to support the enormous ships either in port or on operations.

As a result of the contract 45 highly skilled UK jobs have been sustained and created across the supply chain, including key suppliers at E P Barrus in Bicester, KPM-Marine in Birmingham and Mashfords in Plymouth.

“These versatile craft will elevate the capability of the Ships and shore establishments they are embarked from”

Aleks Blackburn, D&ES Vahana Project Engineer

DE&S wins at the annual Project Management Awards

The delivery of HMS Prince of Wales and completion of the Queen Elizabeth Carrier programme has been successful in winning the coveted APM Project Management Award for Engineering, Construction and Infrastructure Project of the Year. Running annually for over 20 years, the prestigious Project

Management Awards ceremony, was streamed live for the first time. The ceremony was free to watch online with many DE&S colleagues logging in to follow the proceedings. The quality of submissions for this year's awards was of a very high standard and there was strong competition from a broad range of organisations.

The DE&S Queen Elizabeth Carrier team won this award for demonstrating the most effective use of project management, achieving the greatest results and delivering the greatest benefit and innovations to the profession. All of the parties involved in this project handed over the Carrier to the Royal Navy in 2019 marking

the completion of the UK's largest and most complex warship build programme ever undertaken. Delivered on time and within 3% of the cost forecast set in 2013.

This was achieved as a result of the team overcoming extraordinary challenges unique in their scale and complexity. Together they displayed extremely high levels of project management professionalism and determination, while adopting an ethos of "Best for Project" and Enterprise decision making.

At every stage of the build they maximised the lessons learnt from building the first Carrier (HMS Queen Elizabeth) and embedded them into the second Carrier, HMS Prince of Wales. The award acknowledges the commitment and professionalism of all of those involved with HMS Prince of Wales transition to service and this iconic project will deliver benefits across the nation, both now and in decades to come. DE&S Director General Ships Vice Admiral Chris Gardner, said: "Given the amazing level of competition, the team were thrilled to win this prestigious APM award. It is great recognition for the thousands of people who have worked on this programme, which was truly a national endeavour, and has delivered world class capability to the Royal Navy for generations to come."

“It is great recognition for the thousands of people who have worked on this programme”

Vice Admiral Chris Gardner, DE&S Director General Ships



HMS Queen Elizabeth arriving at her home port of Portsmouth (LPhoto Dan Rosenbaum)

60 second spotlight

Aditee Desurkar

Job:
Engineer in the Flight Simulation and Synthetic Trainers delivery team

Your route into DE&S?
I joined DE&S on the Defence Engineering & Science Group Graduate Scheme in 2016 after obtaining my Master's degree in aerospace engineering. Over the course of the scheme, I managed a programme where schoolchildren built aeroplanes and sold them on to private buyers after being certified as light aircraft. I was also seconded to Rolls Royce, where I supported fan blade manufacture. Finally, I gained some customer-facing experience by working on Sentinel R1 at RAF Waddington. After completing my graduate scheme, I have spent the last few years learning about training systems and synthetic environments.

Your claim to fame?
Not really a claim to fame, but I can speak in three languages simultaneously – Marathi, Hindi and English – it makes for fun conversations. I also share my birthday with the cricket legend, Sachin Tendulkar.

Your advice to anyone?
Be true to yourself. Don't do something because you feel obligated to do it, do it because you want to. And keep an open mind, it really will change your outlook on life.

What do you do when you're away from work?
I try to be outdoors as much as possible – the UK has some stunning landscapes. I also didn't grow up with the luxury of having so many countries within easy reach so I am always planning where to travel to next. I am a keen cook and baker too, so I will probably be in the kitchen experimenting if it's a rainy day. I have managed to perfect a great samosa!

What are you most proud of?
Moving countries at 16 and also finishing my Master's degree. It was a culture shock to move to the UK from India, but I like to think I have adapted reasonably well. My Master's degree challenged me and taught me a lot along the way.

At DE&S, I'm one of the committee members of EDNA- (Engineering Development Network for Air). It is a network designed to support new starters and ex-graduates and apprentices in the Air domain. I'm particularly proud of this, as it has all been set up remotely during the coronavirus pandemic.

If you were sent to a desert island, what three things would you take with you?
Assuming I'd be rescued at some point, an e-reader with lots of books, an unlimited supply of coffee, and a phone to take photos and notes to document the desert island life.

What irritates you the most?
People who don't believe in science or logic, especially in the middle of a pandemic.

What is your favourite place in the world?
I'm torn between Pune, India, as it is my hometown, and Scotland. Pune will always be special as it is where I grew up. Scotland was the first place I lived in the UK, and I have very happy memories there. The wilderness of the Scottish Highlands and the people make it very difficult to not fall in love with it!

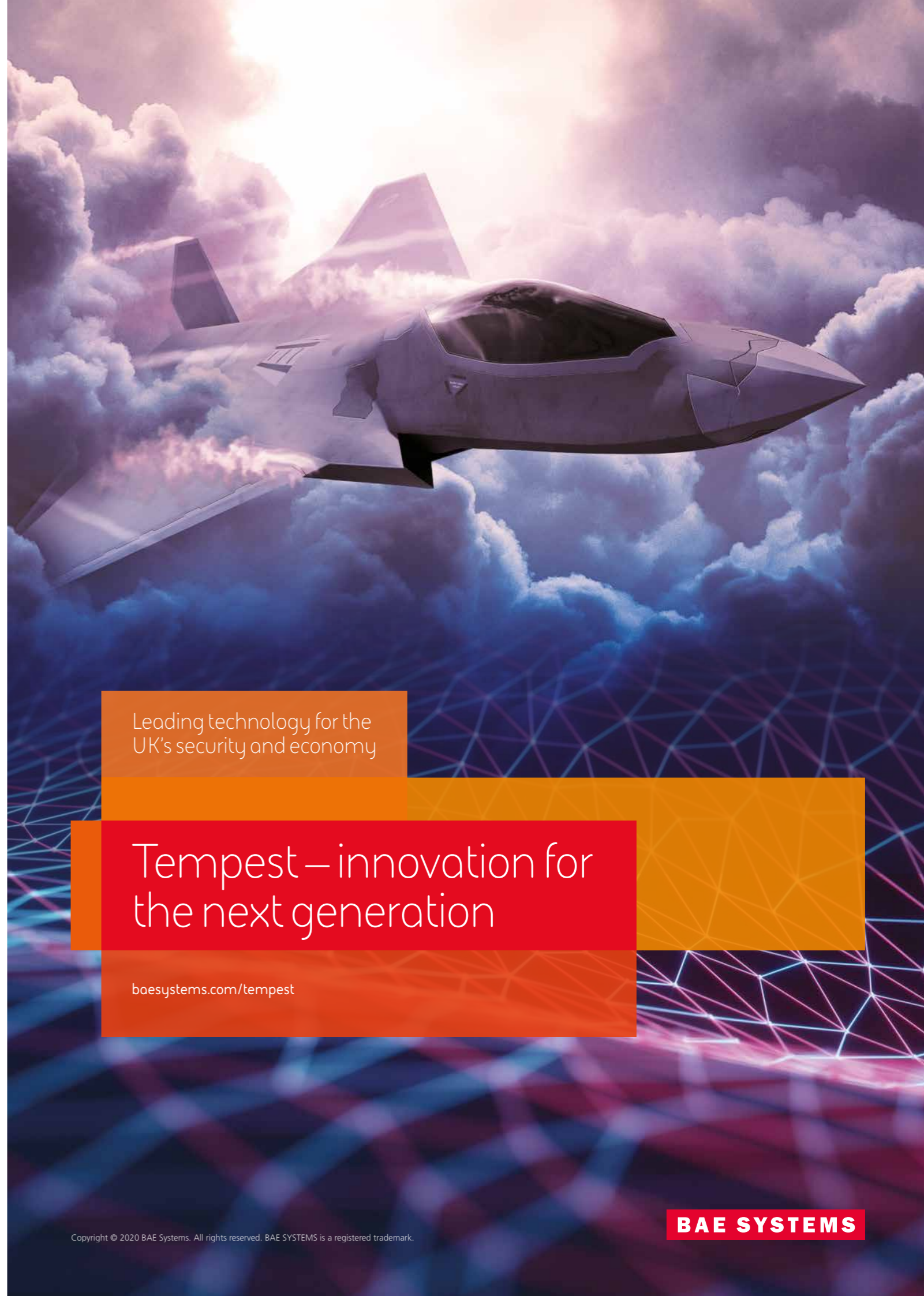
What would surprise people about you?
I had completed multiple hikes in the Himalayas and climbed Ben Nevis by the age of 16.



— “ —
I had completed multiple hikes in the Himalayas and climbed Ben Nevis by the age of 16
— ” —

Do you or someone you know deserve their 60 seconds in the spotlight?

Email
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Remembrance service

The annual Act of Remembrance took place at MoD Abbey Wood (South), to commemorate all those who have lost their lives in past and current conflicts. Sadly, COVID-19 meant that this year numbers were kept to a minimum to comply with Government guidance.

Poppy wreaths were laid on behalf of the Government, DE&S, SDA as well as the four Domains - Land, Ships, Air, and Strategic Enablers - and Trades Union.

The service was officiated by the DE&S Padre with the Bishop of Bristol, Vivienne Faulk, in attendance.

Following the Last Post from the bugler, two minutes silence was observed before the Reveille was played. Wreaths were then laid by dignitaries including DE&S CEO Sir Simon Bollom, deputy CEO Adrian Baguley, Vice Admiral Chris Gardner (Director General Ships), Major General Darren Cook (Director Land Equipment), Air Vice-Marshal



Keith Bethell (Director Combat Air), Ian Booth (CEO Submarine Delivery Agency) and Paul Hollands representing the Trade Unions.

The service concluded with

prayers and blessings.

DE&S Padre Wing Commander Andrew Jones, who led the service, said:

"It was important for us to hold an Act of Remembrance,

even in these difficult times. Bishop Viv was very keen to join us to demonstrate that Abbey Wood has the support of the local community."

Army Rugby Union appoints DE&S coaching stalwart

Major Wayne 'Burnie' Burnard MBE has worked in the DE&S Vehicle Support Team for the past 18 months and has recently been appointed as the Director of Rugby Development for the Army Rugby Union.

Burnie is an experienced rugby coach and has been committed to balancing his operational commitments serving with the armed forces and his commitments to Army Rugby for more than 15 years.

Burnie took up coaching in 2000 and has since coached at every level of representative rugby in the services.

In 2005 Burnie was the Army U20 and U23 assistant coach, moving on to coach the Army A Team and Corps XV as Head Coach. He later became

assistant coach for National League side Canterbury RFC in 2009.

Burnie then became the Head Coach of the UK Armed Forces and in 2018 was selected to be the Head Coach for the Army Senior XV. In his first season, the Army regained the Inter Service Championship after four years as runners up.

In his new role, Major Burnard will be focusing on developing both players and coaches throughout the Army Rugby Union's structure.

Burnie said: "I am really excited to take on this new challenge. The role has been created to ensure players and coaches are given every opportunity to maximise their potential".



Cycling to Istanbul and back

It's a 7,000km round trip to Istanbul and back and DE&S head of Support Chain Information Services (SCIS) in DE&S Digital, Dave Penlington is taking on the challenge in aid of the Combat Stress Charity.

Cycling the equivalent distance on a repeated daily 40-50km, Dave is cycling the country lanes of Gloucestershire near his hometown of Dursley.

Dave, said: "Combat Stress is close to my heart. My nephew who was 18 at the time, was badly injured in Afghanistan and went through some dark time during his rehabilitation. He is very much a positive individual today with a first-class degree in politics, but I still worry for those men and women who carry the mental wounds of Combat though their lives. We need charities like Combat Stress to continue their good work helping those with PTSD and we need to help it and other Charities through the difficult financial circumstances of COVID-19."

Dave is currently on the 111th iteration of the Dursley "Cycling to WFH" loop with another 75 planned to get him to his target of 7,000km – a mere 2,815Km to go.



Cycling has proved tremendously beneficial to Dave with weight loss and improved fitness. He's particularly proud of being able to contribute to Combat Stress in a meaningful way with £1,100 raised so far through the generosity of his team.

If you wish to contribute to Dave's challenge, the link is below
www.justgiving.com/fundraising/dave-penlington

MOTTO the MOD Lottery July winners

- £10,000 Elaine Tripp, Hereford
- £2,500 James Cairney, Faslane
- £1,000 Hilary Wilding, Preston
- £500 Roland Horswell, Plymouth
- £250 Julia Cornthwaite, Bristol
- £100 Kevin Woods, Lossiemouth
- Glenn Chatwood, Gosport
- Mark Furneaux, Devonport
- Mandy Tattershall, Andover
- Christopher Dempster, Bristol
- Sharon Yates, Andover
- William Samuel, Lincoln
- Kay Atkins, Catterick
- Sajjad Meah, London
- James Gold-Lewis, Bristol
- Darren Dowling, Bristol
- Ian Gibson
- Taylor Corrie, Carlisle
- Ian White, Faslane
- Mark Gilling, Bristol
- Lucinda Davis, Bristol
- Debbie Lofthouse, Corsham
- Donna Davison, Hereford
- Sharon Buckland, Plymouth
- Lucy Frost, Bristol

Hannah's Rockin' Robin

The company behind the world-famous Gromit Unleashed trail in Bristol has announced that a figurine of the four-legged hero designed by talented DE&S employee Hannah Bone will be on sale soon.

Hannah, an illustrator and designer in Corporate Communications at Abbey Wood, was chosen to design one of the sculptures for the Gromit Unleashed 2 trail in 2018.

Organisers at Aardman Animation saw her illustrations and asked her if she would design the Rockin' Robin Gromit sculpture at Bristol City's Ashton Gate stadium.

Knowing how much the trail meant to the city, Hannah leapt

at the chance and spent weeks keeping a lid on the design despite constant probing by friends and family.

"It's so exciting, I feel very lucky to have been part of something so special and now I'm able to relive it all again with this release," said Hannah.



Case Study

Sophie Tredwell, Safety and Environmental Engineer, gives her insight into some of the benefits of working for the organisation

Name:

Sophie Tredwell

Job title:

Safety and Environmental Engineer

How long have you worked for DE&S?

I've just completed 5 years!

Why did you choose to pursue a career in DE&S?

I applied for the DESG graduate scheme towards the end of my third year at university without really knowing what I wanted to do with my life. The graduate scheme appealed to me as you were able to choose your own placements which allowed me to try out different projects and domains to see what interested me most before settling into a fulltime role.

What does your role entail?

I've just promoted into a Level 3 Acquisition Safety and Environmental Protection position on the Multi Role Vehicle-Protected and Future All-Terrain Vehicles programmes within the Land Concepts and Assessments area, so I'm still very much getting to grips with it. I am responsible for the management of all safety and environmental activities, ensuring that the platforms are safe and suitable for service before being delivered to the Army.

What are the opportunities to develop and progress within your function?

There are plenty of opportunities to develop skills within the engineering function. I've recently completed my mandatory safety and environmental training to ensure that I am Suitably Qualified and Experienced Personnel for my role. They also offer

funding and support for a range of internal and external courses, depending on interests and job role. The function was also really helpful in reassigning me to a different project to allow me to develop wider skills to progress to the next level.

What do you most enjoy about your job?

I really enjoy getting out and about, seeing the equipment, conducting trials and chatting to the users to get their honest opinions on what you're working on. I find it so much easier to complete tasks if I've seen what I'm working on and can then visualise it back in the office.

What's your ambition?

Right now, I just want to do well in my new role. I don't tend to plan years ahead. I really enjoy doing what I'm doing but keep an eye out for opportunities as and when they arise.

What's your greatest achievement to date?

I recently completed a suite of safety and environmental documentation for a bespoke piece of equipment, providing a robust body of evidence demonstrating that the systems are safe to bring into service. Being able to say that I have contributed to the safe delivery of equipment, and knowing without that work being completed the systems would not be accepted into service, is pretty cool.

Why would you recommend DE&S to others as a great place to work?

There's so much going on across the different domains that there's something to interest everyone. I've had the opportunity to move around the business with relative freedom gaining experience across multiple projects, which really appeals to me and I'm sure that appeals to others too.

What are the social benefits of working for DE&S?

Working for DE&S is so flexible, being able to set your own working hours and having the option of flexi time means I usually complete my weekly hours by Friday lunchtime so that I can spend more time with my boyfriend, family and friends.



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