News story: British Army’s new air defence missile blasts airborne target by Baltic Sea

Trials of the new Land Ceptor weapon took place close to the Baltic Sea on a Swedish test fire range, with video footage showing a missile being launched from a vehicle and destroying an aerial target in a display of the new weapon’s accuracy and power.

Built by MBDA, Land Ceptor comprises the Common Anti-air Modular Missile (CAMM), a launcher vehicle and two fire unit support vehicles. It is being developed to protect British troops on operations from aerial threats, including hostile combat aircraft and air-launched munitions.

Defence Secretary Gavin Williamson said:

> In the face of intensifying threats, it is vital that our Armed Forces have the capabilities to keep Britain safe.
>
> Land Ceptor will be a formidable battlefield barrier, protecting our troops from strikes and enemy aircraft while on operations.

Land Ceptor is highly mobile, can be rapidly deployed across challenging terrain, and be brought into action in less than 20 minutes.

From the same family of weapons systems as Sea Ceptor, which will defend the Royal Navy’s Type 23 and Type 26 Frigates, Land Ceptor will provide the stopping power within the cutting-edge Sky Sabre air defence system, and will equip 16th Regiment, Royal Artillery.

Land Ceptor completes it’s first successful firing trials. Crown copyright.

The success of the Land Ceptor trials follows the Defence Secretary’s recent announcement of Sea Ceptor entering service with the Royal Navy proves CAMM’s effectiveness both in the land and maritime environments.

The trial, which followed previous munitions tests, was the first time Land Ceptor had been test-fired as a whole system, including the cutting-edge SAAB Giraffe radar.

The development and manufacture of Land Ceptor is enabled through a £250 million contract between Defence Equipment and Support (DE&S) and MBDA. Work to develop both Land Ceptor and Sea Ceptor is sustaining 760 MBDA jobs in the UK.

DE&S Director Weapons, Richard Smart, said:

> This trials firing is an important stepping stone towards bringing Land Ceptor into service with the British Army as part of the wider Sky Sabre air defence system. Land Ceptor performed as expected and the firing has helped us to verify innovative modelling of overall system performance.
>
> The DE&S project team, based in Bristol, will continue to work closely with our suppliers to ensure this cutting-edge system provides an effective shield for UK troops as they, in turn, protect the UK’s security and interests.

Land Ceptor has far greater battlefield awareness and intelligence than the current Rapier system as its engagement range is three times greater and the Giraffe radar and Rafael Battlespace Management Command, Control, Compute, Communicate and Inform (BMC4I) system within Sky Sabre will be able to observe incoming threats from seven times further away.

The missiles can be launched in quick succession to defeat as many as eight different threats at once, even if obstacles such as trees and terrain are in the way.

The system will now undergo further development and trials before Sky Sabre enters service, in the early 2020s.

News story: Chemical Weapons Demilitarisation Conference 2018

Speaking at the 21st annual Chemical Weapons Demilitarisation Conference in London, Defence Minister Lord Howe commended the vital work of scientific and technical experts to make the world safe from chemical weapons, while acknowledging the shocking events of the past year, including the use of a chemical weapon in Salisbury, and the continuing use of chemical weapons in Syria.

Defence Minister Lord Howe said:

> In an increasingly dangerous world, we cannot allow these abhorrent weapons to spread once more across the globe. We are working with international partners across the world to agree how best to deal with the use of chemical weapons, and to ensure that those who use chemical weapons are held to account, however long this takes.

The destruction of chemical weapons is a high priority under the 1997 Chemical Weapons Convention (CWC). The Conference provided an opportunity for experts from all over the world to discuss their progress and co-operation in eliminating chemical weapons, and the technical challenges that remain.

Lord Howe highlighted the success of the Organisation for the Prohibition of Chemical Weapons (OPCW), under the leadership of Director General Ahmet Üzümcü, in carrying out successful missions in Syria, in the most challenging operational circumstances in the history of the organisation. He noted also that over 96% of the world's declared chemical weapon stocks had now been destroyed, as verified by inspectors of the Technical Secretariat.

Lord Howe said:

> That’s a remarkable achievement in anyone’s book. No wonder that, under Ambassador Üzümcü’s exemplary leadership, the OPCW was rightly recognised by the award of the Nobel Peace Prize in 2015.

Ambassador Ahmet Üzümcü, Director-General of the Organisation for the Prohibition of Chemical Weapons, said:

> We are now moving into the final phase of work to eliminate chemical weapon stockpiles, with over 96% of the world’s declared stockpiles now destroyed.

> However, the Organisation for the Prohibition of Chemical Weapons continues to face serious challenges in achieving its mission “for the sake of all mankind, to exclude completely the possibility of the use of chemical weapons”.

> I welcome the important role that the Chemical Weapons Demilitarisation Conference continues to play in supporting international efforts to destroy chemical weapons, and contributing to our shared goal of a world free of chemical weapon threats.

Speech: First Sea Lord speech at the RUSI Sea Power Conference

It was hard to know where to start when you think about how to conclude this conference such a valuable day of debate on the future of Naval Warfare.

And while I was thinking about what words to use and where to draw inspiration from and I promise you this is true I was looking through the latest RUSI Journal. And came across an excellent review by Christian Melby of Lawrence Freedman’s new book The Future of War: A History. And that title struck a chord because of what we’re talking about today.

Now I’ll confess straight up that I haven’t yet read Lawrence Freedman’s book, more often than not these days in this job I spend most of my time outside of leave periods reading briefs and papers rather than reading interesting books. But I will try to read it in due course.

But the review was excellent. And if it’s accurate, then the approach that Lawrence is taking in that book is not just what the future is, but how to

look at it. And I think that offers real food for thought to how we try to culminate our work here today.

The key theme is that the study of war should not be separated from the context of what you're looking at the 'concerns of the time' as he calls it in which a war occurs.

Nor can we constrain ourselves to the facts and figures of war, so often the focus of analysis over the last century. Attempts to quantify and measure wars will perhaps never quite tell the entire picture of the conflict.

The world of fiction can make the point really well. The 2015 novel Ghost Fleet: A Novel of the Next World War demonstrates that a rigorously researched story can actually prove sufficiently thought provoking such that it can help to prevent the war it describes. A powerful piece of modern deterrence.

By focussing on the issue of context, Freedman managed to steer clear of predicting the incidence and form of future wars. And I think that's the key component of today it struck me that his reminder to us is not to try and do that.

So maybe instead of trying to predict the incidence and form of future conflicts, maybe it's better instead to consider the context of the maritime environment in 2035, a context that will provide the setting in which future naval warfare may be conducted. So that's what I'll try and do.

We've heard today already about the well-established importance of seaborne trade which dominates our country's economy today and shows every prospect of doing so out into the future. And not just for us but for all maritime nations. 90% of all intercontinental and regional trade by volume; with an estimated global value of $4 trillion per year.

By 2045 it's estimated that Asia will account for 75% of global consumers and this shift in the customer base to that region will only serve to increase our reliance on seaborne trade.

Furthermore, by the middle of this century, we think 70% of the world's population will be concentrated in cities, and most of those cities are on or near the coast. So this urbanised littoral environment will link to a maritime domain that is going to become more congested, more cluttered and more contested.

And with a growing demand for, and dwindling supply of, basic resources, this is going to lead to increased competition over energy, food and water, and that competition will surely play out on the seas.

These are some of the global strategic trends that define the maritime environment as we look out towards 2035.

Britain's access to the global commons that is the sea is arguably the predominant factor behind our place at the top table of the international system. It has been for hundreds of years and I would contend it still is

today.

And as we look forward, that global commons will continue to provide the same opportunities both for access and freedom of manoeuvre that has for so long assured our national prosperity and our national security.

But challenges in that area also abound. Whilst the seas are governed broadly by international law and conventional norms, for the most part the adherence to those laws is reliant on common consent.

It's hard to police them everywhere upon the seas. The sheer size of those oceans and seas makes policing them a nearly impossible. And whilst further regulation would probably risk constraining our own freedom of manoeuvre upon which our trade relies, we must therefore accept that the sea is going to be, increasingly, an environment open to exploitation.

Our interests are not just restricted to activity on the seas either, but also under the sea is just as vital to our prosperity and security.

And then Information, the new global resource, the new global commons. We're going to operate in an increasingly information-dominated battlespace. It's no longer just the enabler to warfare that it used to be, it's now a fully-fledged national lever of power in its own right.

We are increasingly connected; information and the internet pervades every aspect of our life; fiscal, social and cultural.

As I reflected back on a previous event here at RUSI this week, the space conference where my Royal Air Force counterpart Steve Hillier focussed rightly on the intensifying threats to our satellite network on which we depend, which could also impact on our life, it's hard not to conclude that we're looking at challenge from satellites to the sea bed.

And when it comes to the flow of information, 97% of data transfer occurs now not by satellite but by underwater cables. And should that underwater network be compromised in any way it is assessed that satellite networks would only have sufficient bandwidth for about 7% of what currently passes on those cables.

So that international infrastructure is as vulnerable as it is critical. Commercially available unmanned underwater vehicles can already, now locate, photograph and survey undersea cables. And if this is the case, how easy could it be to disrupt the digital network or compromise it with a bespoke military capability that can get at it?

Many of you will know of the existence of the Russian Ocean Reconnaissance Ship Yantar. It's spent much of the last 6 months doing heroic and very demanding work looking for the lost Argentinian submarine in the South Atlantic and now it's in the Eastern Mediterranean looking for their downed fighter aircraft. But it often operates on our continental seabed, and it often switches off AIS when it suits. And we know it has the capacity to get at those cables.

And also Russian submarines which are often reported through open source to be ‘lurking’ in the vicinity of the underwater cables with an assessed capability to also compromise them.

My Fellow chiefs have spoken on several occasions in the last 6 months about the nature of the Russian threat. Here at RUSI a few months ago, General Sir Nick Carter – the Chief of the General Staff and in two weeks’ time the new Chief of Defence Staff presented a very clear perspective of Russia through a land prism.

I fully agree and support his assessment, but clearly you will expect me to make a corresponding maritime focus today.

If you look at Europe from the perspective of Moscow, you would see a peninsular, and you see vulnerable maritime flanks for yourself from which Europe can threaten you. And also vulnerable maritime flanks in Europe that you can exploit.

Indeed, it can be no coincidence that the Russian four strategic zones that the CGS described of the West, the Arctic, the Black Sea and the Far East are pretty much delineated by the bodies of water they lie adjacent to.

In operational terms, we’ve seen Russia exploit in Syria a valuable proving ground for weapons, tactics and procedures, giving their current and future commanders critical operational experience in that theatre. This has been prevalent in the way they have colonized the Eastern Mediterranean, the Black and Caspian Seas.

Some might have regarded, for example, the Kuznetsov carrier group deployment a failure. Everyone remembers the photographs of smoke belching from the funnel. They remember jets being disembarked to Syria on arrival, and two of them being lost during carrier ops in the Med. But knowing what they do I’m pretty sure they will have learned some hard lessons from that. And they will have thought long and hard about the message of presence and posture that deployment brought. I sense they will be better next time; they learn rapidly.

And their proving of their capability to fire the KALIBR cruise missile from ships in the Caspian Sea onto targets in Syria was a groundbreaking moment of how maritime operations can influence the land.

When you then combine that with a 10-fold increase in activity in the North Atlantic, as the Secretary of State mentioned this morning, particularly in the sub-surface environment, the inescapable conclusion is that we are facing significantly emboldened Russian Naval activity, which is continually testing our resolve.

Perhaps even more challenging is Russian methodology they employ hybrid, ambiguous, deliberate and giving the advantage of having the initiative.

It means that whilst an assessment of their military capability is increasingly able to be made, an assessment of intent is (as always) far harder, and that only serves to heighten the risk of miscalculation.

That’s why alongside so many of our key allies here today we’re protecting own back yard in the North Atlantic as a pivotal national task. Because Failure to do so will define our national security situation for decades to come.

Ours will be a joined-up response with our allies. NATO, for so long the cornerstone of our national defence that is being bolstered in our ability to protect those areas, not least by the recently re-constituted US 2nd Fleet, right in the grain of that thinking.

So be in no doubt, the RN has no intention of playing merely a stand by bit part, we will be at the vanguard of this work.

By setting out our stall now, by clearly demonstrating our resolve to defend our interests and uphold the international rules based system, we will set the conditions for the future, and that’s a future that we can, if we are canny, hold right the way out to 2035. That’s why I’m concentrating on it now.

As we consider this challenge within the context of our future operating environment, rarely has it been more important to do so.

The growing importance of the high north over the coming decades, both for indigenous resource and for trade routes, presents new opportunity. But these opportunities also open up a new arena for competition. Without an established rules framework to define our approach to this new environment the potential for escalation there is all too real.

The North Atlantic will not just going to be the limit of our future focus. Many of the threats we face in that Joint Operating Area are deepening, of course, but they are broadening too.

Much of the activity that we are currently engaged in across the world’s oceans serve as an indicator of what we can expect in the future.

- migrants crossing the Mediterranean to Europe to escape instability in Africa will probably be with us for some time
- the presence of strategic choke points threatened by proxy wars in the Middle East; the Houthis in Yemen threatening the straights of Bab Al Mendeb are not going to go away
- the potential for state on state competition in South China Sea

None of these are direct pointers to the future character of Naval conflict in their own right, but they’re pointing to contested and congested waters.

What they do demonstrate is an emergent trend, all of them are manifestations of global competition and the potential for a breakdown of a rules based system.

Non-state players are ever-more present in the maritime domain, and they are empowered through the freedom of weapons proliferation which is arming them. And the resultant surge of investment by nations around the world in their Navies to counter that is only going to serve to increase congestion on, and

above the seas.

Nowhere is the rapid expansion of Naval forces more evident than in China.

Only last week, their first domestically built, 50,000-tonne carrier put to sea for trials, a powerful embodiment of their global ambition.

In 5 years, it's reasonable to expect that wherever we are operating, the Chinese will be there too. And in 10 years, we think the Chinese submarine fleet will outnumber that of the United States Navy.

This creates an interesting bi-lateral dynamic for us as a nation, striking a balance between our relationship with China as a valued trade partner, particularly valuable in the wake of BREXIT, yet also evaluating our relationship as a potentially capable Naval power. Which may not pose direct threat to our activity but our influence on behalf of global Britain could well see them contest our ability to conduct Freedom of Navigation operations, a pivotal maritime component of the Rules Based International System.

And if we consider this context, the backdrop that will define our operations in the decades to come, one thing to me is clear.

The responsibility for our national deterrent vested in the Royal Navy, both nuclear and conventional, overlaid on top of our continuing mission to secure our sea lines of communication and our critical national infrastructure, will need to draw on credible military capability with sufficient versatility to face the full spectrum of threats we face, and sufficient strength to win in a peer-on-peer contest should that be required, almost certainly in conjunction with our allies and partners.

And that response of course starts with the Queen Elizabeth Class Carriers, which will soon sit at the head of a globally deployable balanced fleet.

A fleet that comprises a self-contained force capable of operating under and on water, in the air, from the sea to the land, and with partners and allies through space and cyberspace.

A fleet that is going to carry the heart of our nation's expeditionary strike capability – the F35B Lightning jets around which the carriers are designed. But also to carry our Royal Marines Commandos – the only land force capable of credible, high tempo, high readiness intervention from the sea in all environments and in arduous conditions.

A fleet that will bring a world-beating suite of capabilities, sensors and weapons like the Radars in our Type 45 destroyers, the new Sea Ceptor Missiles in our Frigates that have just been declared in service today as you've heard.

As I highlighted earlier, the platforms that we are building now will be pretty much ones we will be operating in 2035.

So we have to future proof that fleet. Nothing short of the full digitisation

of our service will be sufficient as we head towards a new era of machine-speed warfare.

Our new ships, submarines and aircraft are all designed to be cutting edge from the outset, but we must continue to explore new and evolving technologies to keep them in that place throughout their time in service.

Capabilities like unmanned mine countermeasure vessels and unmanned rotorcraft, open architecture command systems, high energy weapons systems. All of these will complement and enhance our ships' warfighting capabilities in response to new and evolving threats.

We have to have the capability to bring all of that in with the current fleet and innovation will certainly be the key to doing that. The Royal Navy has a strong pedigree in this area which I'm proud of but we constantly need to challenge ourselves to do more. It's the focus of significant investment already, with dedicated tech accelerators in the fields of Cyber, Artificial Intelligence, Information Warfare and unmanned air, surface and underwater vehicles.

But technology alone will not win the conflicts of the future. We need to be innovative in the 'how we do things', not just the 'what with' – I think Nelson understood that and we still take the tempo from him.

So as much as the future fleet will be increasingly automated, so too it will continue to be reliant on the best people to do the things that only people can do.

The values that have defined our service for centuries – we define them now as courage, commitment, loyalty, integrity, discipline and respect; "C2DRIL" as we drum into our sailors – they will be the watchwords of a new generation. Millennials who have grown up in the digital era, young men and women with that innate freedom of thought to innovate and adapt in this modern, high-tech world. We have to get our fair share of them to make that Navy a reality.

And in this interconnected future, and we will continue to operate closely with allies. This demands the compromises of interoperability, both in our equipment and through a better understanding of each other.

So we can continue to build and lead alliances through active engagement, as we are doing right now with NATO forces in the Eastern Med.

So as I conclude, there is no question that in the decades to come the character of Naval warfare is going to continue to evolve, perhaps at a greater pace than we have ever seen before.

But I would like to return to another of the themes of Freedman's book as I close.

As much as the pace of technological change may define the future character of conflict, as he recognised, so too is the future of warfare also shaped by many elements of continuity. Not everything will change and working out which

is which will be key.

In 2035 there is little doubt in my mind that the security and prosperity of this island nation will still rest upon our access to, and our freedom of manoeuvre on, the global commons that is the sea.

So we must protect our vital sea lines of communication. We must protect our vital national offshore and underwater infrastructure. We must protect our natural maritime resources.

And we must deter those who would threaten our interests and seek to compromise the rules which govern the global commons, which are of such vital consequence to our nation's future.

We've got to continue to build alliances, working with our partners to the common good that will enable our national influence to be exerted around the world on behalf of our ambition for global Britain.

And in the decades to come, in keeping with half a millennium of tradition, I'm convinced that's exactly what the Royal Navy intends to do.

News story: Upcoming competition launch

It was announced at the 21st annual Chemical Weapons Demilitarisation Conference in London this week, that the Ministry of Defence and US Department of Defense will be launching a DASA competition to seek innovative technical solutions to the safe destruction of small caches of munitions found on the battlefield.

More details will be made available over the summer with a formal launch scheduled for September.

News story: Defence Minister welcomes first of new carrier-ready helicopter fleet

The helicopter, known as the Commando Merlin Mk4, has been upgraded to a faster and more powerful aircraft than its predecessor. It now sports a

maritime grey coat, has a folding main rotor and tail, upgraded flight controls and a tactical computer. The modifications are designed to ensure it can now operate from sea, and it will take off from ships including the UK's new 65,000-tonne aircraft carrier, HMS Queen Elizabeth.

A total of 25 Commando Merlin aircraft will be delivered to the air wing of the Royal Marines – the Commando Helicopter Force (CHF) –- who will use them to deliver troops and supplies from sea to land.

Defence Minister Guto Bebb said:

> This new version of the Merlin will provide an essential bridge between sea and land for our Marines operating from ships, including our brand-new aircraft carriers. This fleet will deliver troops and supplies to the centre of the action, be that a conflict zone or the site of a humanitarian disaster, as well as providing search and rescue cover. Flown from the Yeovil factory to now be homed here, this is another way defence is supporting the South West, where we spent over £5bn last year – more than any other region in the UK.

Defence Minister Guto Bebb has today announced the delivery of the first of a fleet of new helicopters designed for Royal Marine aircraft carrier operations. Crown copyright.

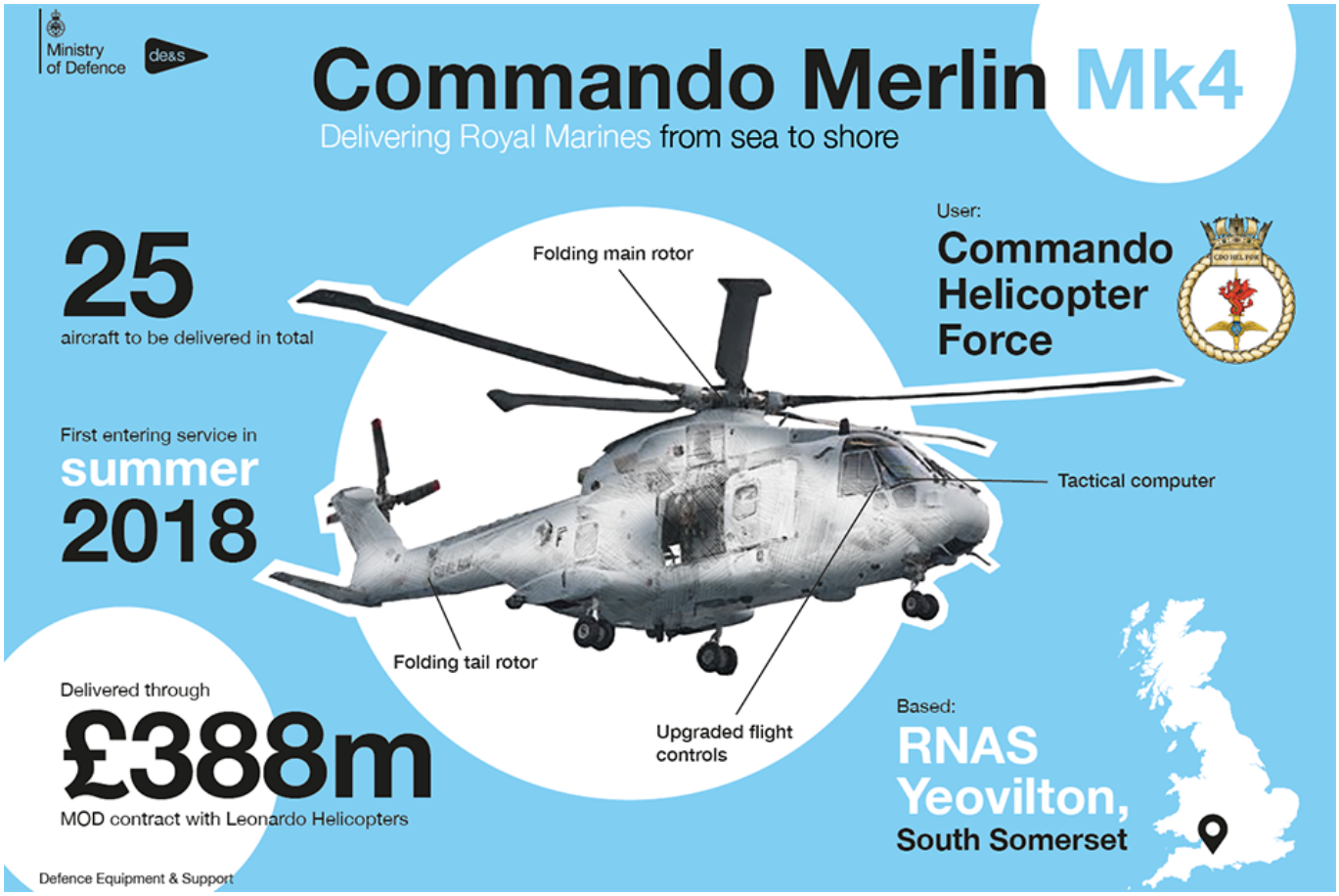
The Commando Merlin Mk4 aircraft, an upgrade from the Merlin Mk3 standard, are being delivered through a £388 million contract between the MOD's Defence

Equipment and Support (DE&S) and Leonardo Helicopters, supporting 175 skilled jobs at Leonardo in Yeovil, and a further 500 across the UK supply chain.

Last year the MOD's highest spend per person in the UK was in the South West, where £920 was spent for each member of the population – totalling around £5,079,000,000. Defence spending in the region also supported one in every 60 jobs there – the highest proportion of jobs support by MOD expenditure in the UK, totalling 33,500 jobs.

DE&S Director Helicopters Air Vice-Marshal Graham Russell said:

> DE&S is proud to have delivered the first Merlin Mk4 to the Royal Navy. Today underscores that DE&S and their industrial partners are delivering. And delivering more with less, thanks to our effective change programme and fantastic staff.
>
> We look forward to all 25 aircraft being fully operational by 2023. DE&S will also ensure the Commando Merlin are supported with a full training and support solution, so they are always available to be deployed across the globe.



Defence Minister Guto Bebb has today announced the delivery of the first of a fleet of new helicopters designed for Royal Marine aircraft carrier operations. Crown copyright.

The delivery will allow air crews to familiarise themselves with the Commando Merlin before they enter service, expected in the summer. They have been

acquired to replace the veteran Sea Kings.

When not deployed on operations the helicopters will be based at RNAS Yeovilton, the home of CHF since the unit was formed in 1997.

CHF, known as the 'Junglies', have served in a commando support role in theatres of operations including Bosnia, Sierra Leone, Iraq and Afghanistan.

It's the ability to fold the tail section – which has been completely rebuilt for the Mk4 – and the rotor heads which assist flying from Royal Navy carriers in particular.

Colonel Lenny Brown RM, the Officer Commanding Commando Helicopter Force said:

> Commando Helicopter Force provides aerial support to the Royal Marines, be they at sea, in an assault ship or in the sand and dust of Afghanistan.
>
> My air crews will soon begin training to fly the Commando Merlin from the Queen Elizabeth Class carriers, marking the start of a new era of Commando support operations.

The news was trailed by Defence Secretary Gavin Williamson earlier today, at the RUSI Sea Power Conference in London. Whilst there, he also announced that all Type 23 frigates will be fitted with the Sea Ceptor air defence system – starting with HMS Argyll as she is deployed to the Asia-Pacific to visit ports across the region.