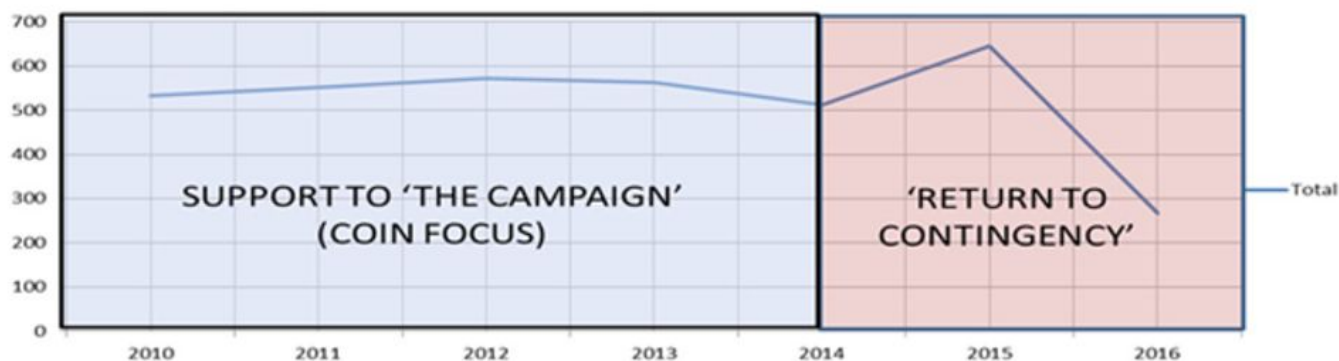


News story: Aviation support to exercises

It won't surprise air aware readers that, whilst deployed on or supporting an exercise, an increased level of risk is often found in relation to normal home base activities. An internal Military Aviation Authority (MAA) study into joint exercises in early 2016 concluded that the MAA should conduct detailed analysis of available exercise data – to further investigate why hazards are increased when conducting exercise activity.

A military exercise can be defined as the employment of military resources in training for operations, either exploring the effects of warfare or testing strategies without actual combat. In recent years Aviation has been critical to the success of such exercises whether supporting Counter Insurgency operations in Iraq and Afghanistan or, more recently, supporting defence as it returns to more contingent style operations. The aim of military exercises is the creation of professional resilient aircrew and support staff who can successfully perform in the complex battlespace of the 21st Century; whilst also ensuring the combat readiness of deployable forces prior to deployment. Exercises provide the means to practice, develop, and validate, within constraints, the practical application of a common doctrine: from small single aircraft individual training exercises, to Squadron collective training events right through to larger Tier 2 and 3 exercises such as the JOINT WARRIOR series, RED FLAG and COUGAR deployments. The MAA study found a healthy reporting culture from units deployed on exercise returning around 500-600 exercise related Defence air safety occurrence reports (DASOR) per year from 2010 to 2016. The analysis also found that the level of pre-exercise planning and preparation and first party assurance, whilst deployed, was of a high standard -with air safety risks captured and exploited in detailed post exercise reports across the three services. Nevertheless, aviation exercise planners and support staff should remind themselves of [Regulatory Article \(RA\) 2305\(6\) 'Air exercise planning and airspace integration](#) regulation'.

Total Ex D-ASORs 2010-16



To capture and understand air safety issues on exercise it was decided to bracket the data by time, and to identify air safety issues from aviation exercises between 2010 and 2016. This time window is of particular interest as it focuses on both aviation exercises supporting Op HERRICK 2010-14 (MST and environmental) and aviation's switch to more contingency era operations from circa 2014 to date. Given the increased importance of Air Land Integration (ALI) capabilities post Op HERRICK, Op ELLAMY, Op TELIC and a focus on the 'whole force' approach to operations (CJIM-Combined Joint, Inter agency and Multinational), a broader and more complex set of exercise scenarios has developed which may suggest the spike in reporting from 2014. It was also noted that due to continuing operations such as Op SHADER not all forces have been able to return to contingency, which may account for gaps in exercise reporting from some force elements.

All readers will be aware that military exercises pose additional risks and hazards to personnel across the four worlds and the 3700 DASOR identified in this 6 year time bracket identified certain themes. The list below, whilst not exclusive, for those not already familiar across the aviation environment will serve as a useful refresher.

PRESSURE

FATIGUE

AUSTERITY

POOR TECHNICAL
ACCOMMODATION

CONGESTED
AIRSPACE

ENHANCED APPETITE TO TAKE RISK

MISSION CREEP

IT INFRASTRUCTURE

UNFAMILIAR
OPERATING
ENVIRONMENT

CLIMATIC
EXTREMES

[News story: Defence Minister announces successful first firings of Sea Ceptor missiles to protect new aircraft carriers](#)

The Minister visited defence company MBDA's site in Filton, near Bristol, meeting with local graduates, apprentices and other employees working on the Sea Ceptor system.

The new air missile defence system can intercept and destroy enemy missiles travelling at supersonic speeds and will form part of the protection for the nation's new aircraft carriers. The first firings were conducted from Type 23 frigate HMS Argyll whilst off the coast of Scotland.

Minister for Defence Procurement Harriett Baldwin said:

Sea Ceptor will protect our interests against threats both known and unknown. It will launch from the Royal Navy's new Type 26 frigates as they keep our nuclear deterrent submarines and the UK's

two new aircraft carriers safe on operations around the globe.

Sea Ceptor supports 600 UK jobs and is yet another example of how our rising defence budget is being spent on cutting-edge kit to help our Armed Forces meet future threats.



The Royal Navy Type 23 frigate HMS Argyll, which fired the Sea Ceptor missiles earlier this Summer.

Sea Ceptor, which uses MBDA's next-generation Common Anti-air Modular Missile (CAMM), is being fitted to replace the Sea Wolf weapon system on the Type 23 frigates. The air defence system will also be used on the new Type 26 frigates and Land Ceptor, which will replace Rapier for the British Army.

Using innovations in radar and datalink technology that will guide these potent missiles with pinpoint accuracy, Sea Ceptor will provide the Royal Navy with an improved shield against airborne threats such as the new generation of supersonic anti-ship missiles, fast jets, helicopters and unmanned aerial vehicles.

Commander Toby Shaughnessy, the Commanding Officer of HMS Argyll, said:

This is an exciting upgrade in capability and a great opportunity for HMS Argyll to demonstrate what the missile system can do to protect our ships from future threats.

Sea Ceptor is an impressive and innovative system, demonstrating that the Royal Navy is at the cutting edge of technology and working hard to keep Britain safe. I am immensely proud of my ship's company and the work they put in to make this test firing possible.

HMS Argyll will conduct further firing trials of the Sea Ceptor system [before she deploys to Japan next year](#). Alongside providing robust self-defence, importantly Sea Ceptor defends escort vessels within a maritime task group, such as for the new Queen Elizabeth Class aircraft carriers.



One of the Sea Ceptor missiles fired by HMS Argyll earlier this Summer. MBDA Copyright.

The system uses a new UK-developed missile capable of reaching speeds of up to Mach 3 and will have the ability to deal with multiple targets simultaneously, protecting an area of around 500 square miles (1,300 square kilometres) over land or sea.

As part of MBDA's CAMM programme, Sea Ceptor supports around 600 MBDA jobs and its supply chain in key locations across the UK such as Stevenage, Filton and Bolton.

Tony Douglas, Chief Executive Officer for the MOD's procurement organisation Defence Equipment and Support, which is based at MOD

Abbey Wood in Bristol, said:

The firings are an important step forward in proving the significant improvements over previous air defence systems and further evidence of our commitment to provide the very best equipment to our armed forces.

The Defence Minister also visited Airbus' plant in Filton, near Bristol, which is the heart of the design and manufacture of some of the world's most technologically advanced aircraft. The Minister met with some of Airbus' 6000 local employees, including engineers working on research and technology for future aircraft projects.

The news comes after the Defence Minister confirmed a [£100m contract to fit the Sea Ceptor system to the Type 26 frigates](#) last year. Earlier this year Defence Secretary Sir Michael Fallon also announced a [£539 million investment in new missile systems](#).

[News story: Scottish mine hunter home after three-year tour](#)

Royal Navy mine hunter HMS Penzance returned to her Scottish base of operations today after spending three years helping to protect vital waterways in the Gulf.

Sailing the ship as it made its way up the Gare Loch were Crew 1 from Faslane's First Mine Counter Measures Squadron (MCM1) who have served with the vessel for the past eight months.

A Royal Navy Sandown class Mine Counter Measures Vessel (MCMV), during her three-years deployed to the Middle East HMS Penzance has spent over 7,500 hours at sea and sailed more than 34,000 miles.

At any one time the Royal Navy has four mine hunters working in the Gulf – two Scottish-based Sandown class ships from HM Naval Base Clyde and two Hunt class vessels which are usually based in Portsmouth.

While there, the vessels conducted routine surveys, sea-bed clearance and mine clearance operations. The ships provide a visible naval presence in the region where stability and good relations with local nations is vital. Much of the UK's gas, as well as other products, come from the Gulf region and the Royal Navy's efforts are of vital importance to the UK economy.

Commanding Officer of HMS Penzance, Lieutenant Commander Jim Lovell, said:

The ship has performed everything asked of her during the deployment and I could not be more proud of my Ship's Company.

A professional and versatile team, they have delivered everything I have asked of them but now it's time for some very well earned leave.

HMS Penzance left Faslane in June 2014 for service in the Gulf with Crew 1 joining the ship in January 2017- an especially long deployment for the crew of a mine hunter.

While the ships stay on deployment in the region for years at a time, the crews are rotated every six-months or so, flying out to join the vessels.

During their return home, family members and friends gathered at the Faslane dockside to provide an emotional welcome. A lone piper played from the deck of the mine hunter as she berthed alongside while a touch of musical pageantry was provided by the Royal Armoured Corps Band.

It was a particularly special occasion for one member of HMS Penzance's ship's company – Petty Officer (Mine Warfare) Mark Titman from Sheffield. As the ship berthed, banners on the deck proclaimed his love for his partner, 32-year-old Laura Campbell from Glasgow, who awaited his return.

First down the gangway, Mark got on one knee to propose to Laura who immediately accepted.

Petty Officer (Mine Warfare), Mark Titman, said:

My daughter, Ava, was born just prior to the deployment and was just four-weeks –old when I left.

I am proud to be able to do my job and even more proud the way that my partner Laura has coped in bringing up our daughter. It leaves me in no doubt whatsoever that she is the perfect women for me!

In January this year, HMS Penzance was one of five Royal Navy vessels who joined forces with the United States, Australia, France and Italy for exercises in the Gulf, testing their expertise in locating underwater explosives.

Working alongside HMS Bangor, HMS Chiddingfold, HMS Daring and command ship RFA Lyme Bay, Penzance helped clear an exercise minefield, making use of unmanned underwater vehicles, divers, helicopters and other specialist equipment in challenging conditions.

More recently the ship and her crew were involved in the disposal of live ordnance off the coast of Cyprus.

At HM Naval Base Clyde to welcome HMS Penzance was Commander Nick Unwin –

Commanding Officer of the First Mine Counter Measures Squadron – and the captain who sailed the ship to the Gulf back in 2014.

Commander Unwin, said:

It's a great moment for me to see Penzance return today after over three-years away from home. I was the Commanding Officer to deploy her to the Middle East region in June 2014 and as the MCM1 Squadron Commander today, it gives me a sense of closure to that whole period.

As a former Commanding Officer, you still have a soft spot for a ship and it's wonderful to see Penzance back in such good shape. That said, it's business as usual for the Squadron; HMS Blyth has picked up the baton for the next three-years in the Gulf and HMS Pembroke deployed to a NATO group just last Wednesday.

These small ships are the enduring, forward-deployed British mine countermeasures presence East of Suez and are ready to ensure security of the critical sea lanes we rely upon for our imports and exports and our nation's economy.

Maritime trade is the lifeblood of the UK economy and industry with 95 per cent of Britain's economic activity depending on the oceans. Each year the UK imports goods worth £524 billion and without the Royal Navy acting as a deterrent the effect on the economy would be overwhelming.

Commodore Jim Perks, Commodore of the Faslane Flotilla, said:

The crew's eight month deployment is a significant achievement, not just for the 40 men and women at sea, but also for their families and friends who have supported them so well and missed them so much.

It is not often a crew has the opportunity to bring their ship home as these vessels are worked hard and spend over three years forward-deployed to the Middle East and the Gulf as part of the UK's presence East of Suez. It is a special moment to see Penzance return and a proud moment for Crew 1.

Their operational tasks have taken them from the Gulf to the Arabian Sea and to the Eastern Mediterranean and they have performed exceptionally well throughout. It's a job really well done, and now it is time to be with their families.

[News story: UK steps up commitment to countering Daesh](#)

44 additional Royal Engineers will deploy to Al Asad Airbase in August, increasing the UK footprint there to over 300 and bringing the total number of British troops in Iraq to over 600. The additional personnel will construct a camp of 80 housing units, a squadron headquarters and offices, freeing up coalition personnel to support counter-Daesh operations in the wider region.

Defence Secretary, Sir Michael Fallon, said:

We are stepping up our contribution to the fight against Daesh and fulfilling Britain's role as a key player in the global coalition.

Daesh is being defeated. Iraqi forces, backed by coalition airstrikes, have now liberated 70% of the territory Daesh held and the victims of its barbarism are being helped by our humanitarian support. These extra troops will help support operations to bring the defeat of Daesh a step closer.

The troops from 5 Armoured Engineer Squadron, 22 Engineer Regiment in Tidworth, are held at readiness for just such a task. They will be deployed to Iraq for around six months and have been tasked with constructing infrastructure including accommodation and offices in the coalition camp.

The deployment will increase the number of UK personnel currently supporting the multinational effort against Daesh to over 600. They are primarily involved in training Iraqi security forces in battle winning infantry, counter-IED, engineering and combat medical skills, with over 58,000 Iraqis trained so far. In addition to personnel on the ground in Iraq, RAF aircraft have carried out around 1400 strikes against Daesh from their base in Akrotiri, Cyprus.

[News story: Glasgow engineers scope century of submarine innovation](#)

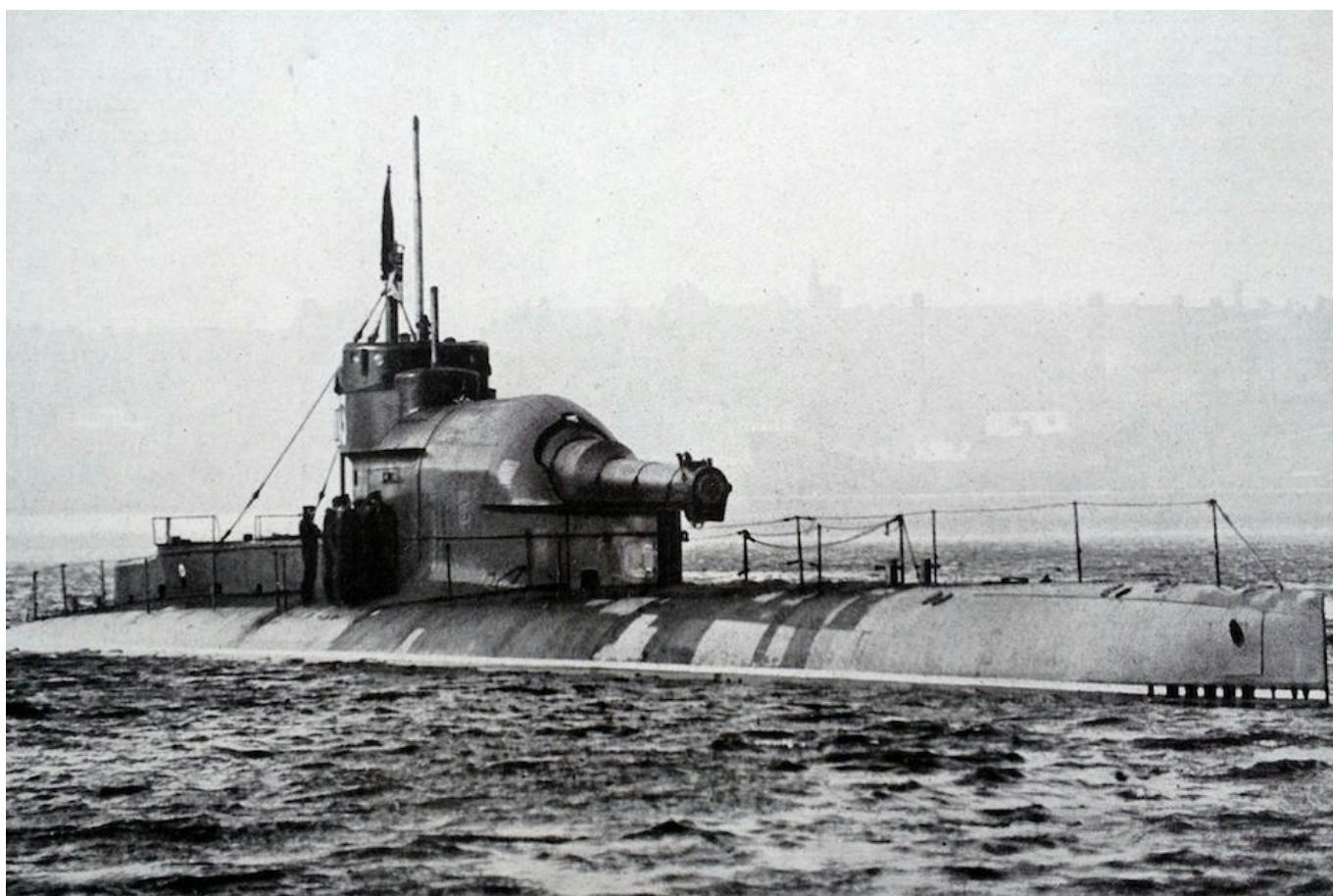
Govan-based [Thales](#) delivered the first submarine periscope, the FY1, to the submarine M3 in late summer 1917. Since then, every class of RN submarine has been fitted with a periscope or optronics mast designed and built by Thales' engineers in Glasgow.

Today Thales' state-of-the-art optronics masts support submarines navigation, warfare and communications systems, including provide thermal imaging and night vision capabilities. The masts can complete a full 360° sweep of the horizon, looking for potential threats, in only a few seconds, providing high definition images of the battle space to commanders before they are detected by an adversary.

Defence Procurement Minister, Harriett Baldwin said:

This anniversary marks a proud record of Scottish engineering contributing directly to UK defence and national security by providing the eyes and ears for our nuclear deterrent and attack submarines.

Generations of highly skilled engineers across Scotland have applied battle winning technologies to meet the needs of their UK armed forces, as well as exporting their innovations to dozens of navies around the world.



Royal Navy submarine M3 was fitted with the first FY1 No.1 periscope.

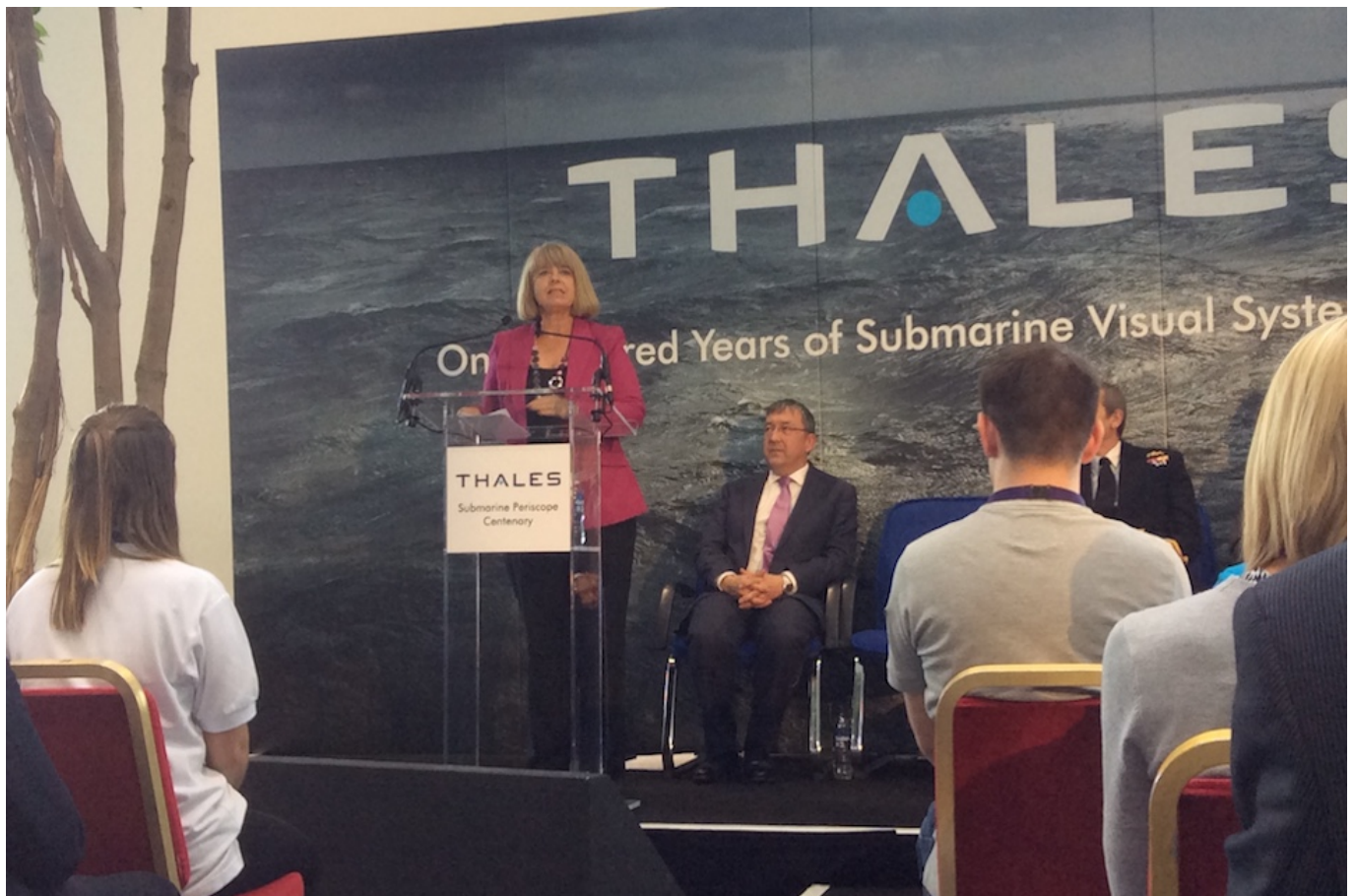
Victor Chavez, CEO, Thales UK, added:

Arguably our greatest single innovation was introducing a night vision capability to allow submarines to navigate and gather intelligence 24/7.

However, our latest full remote control, non-hull penetrating optronics systems give naval architects more design flexibility by not restricting them to co-locating the fin and the control room via a 50ft long periscope. These options, combined with the digital inboard control and display system, provide commanders with a leap forward in submarine capability.

Optronics masts are electronic imaging systems and do not penetrate a submarine's hull, but are contained in the conning tower or 'fin'. They are fitted to all seven of the new Astute-class submarines, the first three of which are already in service from HM Naval Base Clyde.

Thales are currently bidding competitively to have their optronics masts procured for the BAE Systems Maritime build of four new Dreadnought nuclear deterrent submarines which will come into service in the 2030s. The company will conduct sea trials of their latest mast in 2018.



Defence Minister Harriett Baldwin speaking at Thales today.

Thales' site at Glasgow has 129 years heritage and currently employs 600 people, mainly very highly skilled technical and engineering jobs, designing and building optronics systems for the Royal Navy, Army and Royal Air Force.

From 2020 Scotland's HM Naval Base Clyde will be home to the entire UK Submarine Service of seven hunter killer and four deterrent submarines.