

Defence Ministry Unveils Plan for Maiden Deployment of Queen Elizabeth Carrier



Royal navy aircraft carrier HMS Queen Elizabeth (R08) transits the Atlantic Ocean in 2019. *HNLMS De Ruyter*

LONDON – The U.K. Ministry of Defence (MoD) has made public details of the first deployment for its new aircraft carrier, scheduled to begin next month, according to an April 27 MoD announcement.

The carrier strike group, led by HMS Queen Elizabeth, will sail for the Indo-Pacific in May in the largest concentration of British air and maritime power in years, the ministry said on Monday.

The strike group will include the Daring-class destroyers, Defender and Diamond; Norfolk-class frigates, Kent and Richmond; an Astute-class attack submarine; and the support ships Fort Victoria and Tidespring.

In addition, the Dutch frigate Evertsen and U.S. destroyer The Sullivans will accompany the carrier group.

For her maiden deployment, the Queen Elizabeth will carry eight Royal Air Force F-35B Lightning II fighters and a squadron of 10 U.S. Marine Corps F-35Bs; four AW159 Wildcat maritime attack helicopters; seven Merlin Mk 2 anti-submarine; and three Merlin Mk 4 commando helicopters.

A company of Royal Marine Commandos will also participate in the mission.

The carrier strike group is scheduled to visit more than 40 countries and conduct more than 70 engagements, including dual carrier operations with French aircraft carrier Charles de Gaulle in the Mediterranean, the defense ministry said.

Engagements are scheduled with India, Japan, Singapore and South Korea. The strike group will also take part in Exercise Bersama Lima to mark the 50th anniversary of the five-powers agreement with Malaysia, Singapore, Australia and New Zealand.

Thales Selected by Lockheed Martin to deliver ALFS to the U.S., Indian, Greek and Danish Navies



Aviation Ordnanceman 3rd Class Christian Guillen, from Dallas, assigned to Gerald R. Ford's (CVN 78) air department, performs maintenance on an airborne low frequency sonar, April 15, 2021. *U.S. NAVY / Mass Communication Specialist 3rd Class Robert Stamer*

ARLINGTON, Va. – Thales has signed a contract with Lockheed Martin as a tier-one supplier for the delivery of up to 55 airborne anti-submarine warfare sonars, Thales said in an April 27 release. The ALFS (Airborne Low-Frequency Sonar) dipping sonars will be installed on the MH-60R platform for the U.S. Navy and three additional navies. Delivery of the first 42 systems will occur over the next five years with the delivery of 13 optional systems to occur in year six.

Thales has delivered more than 300 ALFS sonars to the U.S. Navy since the early 2000s and this new contract with Lockheed Martin will continue to support the Navy's readiness strategy. The navies of India, Denmark and Greece will receive their first deliveries of the ALFS sonar system through direct U.S. Foreign Military Sales of the MH-60R platform.

To maintain control over their maritime space and protect security interests around the world, naval forces need reliable, high-performing systems to operate with optimum effect on missions including anti-submarine warfare, maritime search and rescue, defense of maritime approaches and fleet protection for naval forces on deployment.

Offering unparalleled protection to maritime convoys, the ALFS anti-submarine warfare system is capable of detecting, classifying, prosecuting, harassing or attacking submarines, making Thales the benchmark for the world's major navies. In addition to the U.S. Navy, the other navies that have chosen Thales dipping sonar solutions include the navies of Australia, France, Norway, the Philippines, Poland, South Korea, Sweden, the United Arab Emirates, and the United Kingdom.

As a low-frequency active sonar, ALFS is designed for the initial detection and tracking of opposing submarines. It offers a long detection range with a wide coverage rate and low false alarm level, both in deep and coastal waters. It can be used autonomously to clear a particular area or as a complementary anti-submarine warfare asset to sonars on-board surface vessels for target location and attack.

"Earning the trust of the U.S. Navy, its allies and partners around the globe is a source of pride for our team," said Alexis Morel, vice president for Underwater systems, Thales. "This contract enhances our position as a strategic supplier to Lockheed Martin and further consolidates the Group's world leadership position in anti-submarine warfare systems. We will continue to improve the performance and competitiveness of our airborne sonars to meet the new anti-submarine warfare operational challenges of our customers."

IRGCN Interaction with U.S. Naval Vessels in the North Arabian Gulf



Three Iranian Islamic Revolutionary Guard Corps Navy (IRGCN) fast inshore attack craft (FIAC) approach the U.S. Coast Guard patrol boat USCGC Baranof (WPB 1318) and patrol coastal ship USS Firebolt (PC 10), while the U.S. vessels were conducting routine maritime security patrols in the international waters of the North Arabian Gulf, April 26. Firebolt is assigned to U.S. Naval Forces Central Command's Task Force (TF) 55 and Baranof is assigned to Patrol Forces Southwest Asia (PATFORSWA), the largest U.S. Coast Guard unit outside the United States, and operates under TF 55. *U.S. NAVY*

BAHRAIN – At approximately 8 p.m. on April 26, three Iranian Islamic Revolutionary Guard Corps Navy (IRGCN) fast inshore attack craft (FIAC) failed to exercise due regard for the safety of other vessels as required under international law as

they came into close proximity to U.S. naval vessels in international waters of the north Arabian Gulf, the U.S. 5th Fleet said in an April 27 release.

The IRGCN armed speed boats rapidly approached U.S. Navy patrol coastal ship USS Firebolt (PC 10) and U.S. Coast Guard patrol boat USCGC Baranoff (WPB 1318) to an unnecessarily close range with unknown intent, including a closest point of approach (CPA) of 68 yards to both U.S. ships.

Firebolt and Baranoff were conducting routine maritime security operations in international waters during the time of the incident.

The U.S. crews issued multiple warnings via bridge-to-bridge radio and loud-hailer devices, but the IRGCN vessels continued their close-range maneuvers. The crew of Firebolt then fired warning shots, and the IRGCN vessels moved away to a safe distance from the U.S. vessels.

Throughout the interaction, U.S. forces proactively communicated with the IRGCN vessels and executed pre-planned responses to reduce the risk of miscalculation, avoid a collision, and to de-escalate the situation.

The IRGCN's actions increased the risk of miscalculation and/or collision, were not in accordance with the internationally recognized Convention on the International Regulations for Preventing Collisions at Sea (COLREGS) "rules of the road" or internationally recognized maritime customs. In addition, the IRGCN actions were not in accordance with the obligation under international law to act with due regard for the safety of other vessels in the area.

U.S. naval forces continue to remain vigilant and are trained to act in a professional manner, while commanding officers retain the inherent right to act in self-defense.

U.S. Coast Guard Cutter Enters Black Sea



Seaman Cheyenne Solis Headlam looks out from the bridge wing of USCGC Hamilton (WMSL 753) while the Turkish coast guard escorts Hamilton in the Mediterranean Sea, April 27, 2021. U.S. Coast Guard Cutter Hamilton is on a routine deployment in the U.S. 6th Fleet area of operations in support of U.S. national interests and security in Europe and Africa. *U.S. COAST GUARD photo by Petty Officer 3rd Class Sydney Phoenix*

BLACK SEA – The Legend-class national security cutter USCGC Hamilton (WMSL 753) transited into the Black Sea to support NATO Allies and partners, April 27, 2021, the U.S. U.S. Naval Forces Europe and Africa/U.S. 6th Fleet Public Affairs said in an April 27 release.

Hamilton is the first U.S. Coast Guard cutter to visit the

Black Sea since 2008. The last U.S. Coast Guard cutter to visit the Black Sea, USCGC Dallas (WMEC 716), sailed to the Black Sea twice, in 2008 and 1995.

The Ticonderoga-class guided-missile cruiser USS Monterey (CG 61) and Arleigh Burke-class guided-missile destroyer USS Thomas Hudner (DDG 116) conducted Black Sea operations on a routine patrol to maintain maritime security alongside other NATO Allies and partners in March 2021.

This patrol comes after Hamilton conducted logistics visits to Naples, Italy, and Rota, Spain. The U.S. Coast Guard is conducting a routine deployment in U.S. 6th Fleet, working alongside allies, building maritime domain awareness and sharing best practices with partner nation navies and coast guards.

The U.S. Navy and U.S. Coast Guard operate forward, from the littoral to the open ocean, ensuring stability and open sea lanes across all maritime domains. U.S. 6th Fleet routinely conducts operations in the Black Sea.

Hamilton is the fourth national security cutter and is the fifth named for the father of the U.S. Coast Guard – Alexander Hamilton, the first secretary of the Treasury and advocate for creating the U.S. Revenue Cutter Service.

The U.S. Coast Guard remains operational during COVID-19, following all COVID-19 safety precautions and regulations.

Coast Guard Cutter Delivers

Emergency Supplies to Palau following Typhoon Surigae



The crew of the Coast Guard Cutter Myrtle Hazard (WPC 1139) deliver emergency supplies to the island of Kayangel, Palau, following Typhoon Surigae, April 24, 2021. The supplies included water and food for the people of Kayangel. *U.S. COAST GUARD photo courtesy of Petty Officer 3rd Class Philip Groff*
SANTA RITA, Guam – The crew of the Coast Guard Cutter Myrtle Hazard (WPC 1139) delivered emergency supplies including water and food to the island of Kayangel, April 24, the Coast Guard 14th District said in an April 26 release.

The mission was in response to a national emergency declared by President Surangel Whipps Jr. of Palau after Typhoon Surigae devastated the region last week.

“Today, our crew had a unique opportunity to conduct one of the most satisfying missions the United States Coast Guard is

known for, humanitarian aid,” said Petty Officer 2nd Class Andrew Johnson, a coxswain aboard the Myrtle Hazard. “We were extremely excited to be able to offer help, which for a small island such as Kayangel makes a major impact. I am proud I was able to be a part of it.”

Last week the slow-moving typhoon made landfall in Palau bringing significant rainfall and heavy winds. The storm caused flooding and resulted in damage to homes and properties throughout the islands.

On April 18, the president of Palau declared a national emergency and made an official request to the United States embassy for assistance. Capt. Christopher Chase, commander, Coast Guard Sector Guam and Ambassador John Hennessey-Niland, U.S. Embassy Koror, spoke by phone and determined what supplies were needed and the best method to deliver them.

At the time, the Myrtle Hazard’s crew was conducting an illegal, unreported and unregulated fisheries patrol north of Guam and was recalled back to homeport for the humanitarian mission.

On Guam, supplies were being donated and collected by a number of different organizations including the Chief Petty Officers Association Marianas Chapter, the U.S Naval Base Chapel, the Orotte Commissary, the Ngaraad Club of Guam, the Kayangel Club of Guam and the Guam Paluan community.

The cutter then departed Guam for the 800 nautical mile transit to Palau with the supplies.

Upon arriving in Palau the crew worked closely with the government and the U.S. embassy to coordinate a safe, contactless transfer of the supplies to Kayangel and to ensure the safety of both the people of Palau and the cutters crew while conserving the nation’s vital medical supplies.

“It’s a rewarding mission to deliver aid whenever required,”

said Lt. Tony Seleznick, the Myrtle Hazard's commanding officer. "This operation exemplified the great partnership between the U.S. and the Republic of Palau. The crew of Myrtle Hazard performed excellently and highlighted why the U.S. Coast Guard is the world's best Coast Guard."

USSOCOM Awards AeroVironment \$26 Million for Switchblade 600 Tactical Missile Systems



An artist's illustration of the Switchblade 600. *AEROVIRONMENT* SIMI VALLEY, Calif. – AeroVironment Inc. has been awarded a cost-plus-fixed-fee contract on March 31, 2021, by the United States Special Operations Command (USSOCOM) for \$26 million

with \$7 million funded upon receipt. The contract includes delivery and integration of Switchblade 600 tactical missile systems into specialized maritime platforms, scheduled to be completed by January 2023.

“Our team worked closely with our customers to develop Switchblade 600, a loitering missile system that addresses the increasingly complex needs and mission requirements of counterinsurgency operations and those against peer and near-peer adversaries,” said Brett Hush, AeroVironment vice president and product line general manager for tactical missile systems. “Integrating Switchblade 600 into combat platforms, such as the USSOCOM’s specialized maritime vessels, enhances force overmatch, minimizes warfighter exposure to enemy direct and indirect fires and accelerates the maturation of this innovative solution.”

The AeroVironment Switchblade 600 is an all-in-one, man-portable system equipped with a high-performance electro-optical/infrared gimballed sensor suite, precision flight control and more than 40 minutes of flight time to deliver unprecedented tactical reconnaissance, surveillance and target acquisition (RSTA). Its anti-armor warhead enables engagement and prosecution of hardened static and moving light armored vehicles from multiple angles – without external ISR or fires assets – for precise, localized effects and minimal collateral damage.

**GAO Report: Massive
Sustainment Costs Creating**

F-35 Affordability Issues



An F-35B Lightning II assigned to the 31st Marine Expeditionary Unit (MEU) lands on the flight deck of the forward-deployed amphibious assault ship USS America (LHA 6). America, lead ship of the America Amphibious Ready Group, along with the 31st MEU, is operating in the U.S. 7th Fleet area of responsibility to enhance interoperability with allies and partners and serve as a ready response force to defend peace and stability in the Indo-Pacific region. *U.S. NAVY / Mass Communication Specialist Seaman Matthew Cavenaile*

ARLINGTON, Va. – Sustaining the troubled Lockheed Martin F-35 Lightning II strike fighter over its expected 66-year service life will cost more than the total purchase price of thousands of the aircraft, the Pentagon's most expensive weapons platform, a government watchdog told lawmakers.

The Defense Department plans to acquire nearly 2,500 F-35 aircraft for about \$400 billion over the next five decades for the Air Force, Navy and Marine Corps. However, the latest Government Accountability Office (GAO) report on the nation's

biggest weapons program indicates the services will incur an additional \$1.3 trillion in sustainment costs for maintenance, repairs and technology upgrades over that same period.

That raises the issue of the services' affordability targets, "how much the Air Force, the Navy and Marine Corps can afford to spend to sustain the F-35," GAO's Diana Maurer, director of military structure and operational issues, told a joint hearing by two subcommittees of the House Armed Services Committee (HASC) April 22. Originally estimated at \$1.11 trillion in 2012, sustainment costs for the Fifth Generation fighter have grown to \$1.27 trillion, despite efforts to reduce costs.

"The bottom line here is the services have a plane that they can't afford to fly the way they want to fly it, at least in the long term," Maurer told the HASC Tactical Air and Land Forces and the Readiness subcommittees.

The services face a substantial and growing gap between estimated sustainment costs and affordability constraints – costs per tail, per year that the services project they can afford. The preliminary GAO report to Congress said the gap would total about \$6 billion in steady state year 2036 alone. The services will collectively be confronted with tens of billions of dollars in sustainment costs that they project as unaffordable during the program.



Marines with Marine Fighter Attack Squadron (VMFA) 211 conduct pre-flight checks on F-35B Lightning II Joint Strike Fighters aboard the Royal Navy aircraft carrier HMS Queen Elizabeth (R 08) in the North Sea, Oct. 10, 2020. VMFA-211 is an F-35B

Lightning II squadron assigned to Marine Aircraft Group 13, 3rd Marine Aircraft Wing. Its mission is to intercept and destroy enemy aircraft under all weather conditions and attack and destroy surface targets in support of Fleet Marine Expeditionary Forces. *U.S. MARINE CORPS / 1st Lt. Zachary Bodner*

The Air Force, which is buying the most aircraft, 1,763 F-35As – the conventional takeoff and landing variant – needs to reduce estimated annual per-plane costs by \$3.7 million (or 47%) by 2036, or costs in that year alone will be \$4.4 billion more than the Air Force can afford, the GAO said. The Navy and Marine Corps, which are buying hundreds fewer aircraft, face smaller, but significant affordability gaps. For the Navy, which plans to buy 273 F-35Cs, the aircraft carrier variant, the gap would total \$655 million, and for the Marine Corps buy of 353 F-35Bs, the short takeoff and vertical landing variant, and 67 of their own F-35Cs, the total cost overrun in 2036 would be \$886 million.

GAO's draft report suggested Congress consider requiring annual Pentagon reports on progress in achieving the affordability constraints. It also suggested making F-35 procurement decisions contingent on Defense Department in achieving these constraints.

Subcommittee members' reaction to the report ranged from outrage to dismay. If the F-35 program can't control and reduce sustainment costs, "we may need to invest in other, more affordable programs," said New Jersey Democrat Rep. Donald Norcross, chairman of the readiness subcommittee.

VTG Awarded \$116M NIWC-PAC Contract for C4ISR Engineering and Production



The Naval Information Warfare Center Pacific tests there autonomy software system on an Amphibious Assault Vehicle provided by the Amphibious Vehicle Testing Branch at the Del Mar Boat Basin on Marine Corps Base Camp Pendleton, California, Sept. 23, 2019. *U.S. MARINE CORPS Lance Cpl. Andrew Cortez*

CHANTILLY, Va. – VTG, a provider of force modernization and digital transformation solutions, has won a prime contract from the Naval Information Warfare Center Pacific (NIWC-PAC) to provide C4ISR engineering and production services to its Network Integration Engineering Facility, the company said in an April 26 release.

The indefinite delivery, indefinite quantity NIEF Production Services contract has a potential value of \$116 million over a

five-year performance period.

“For more than 50 years, VTG has provided the Naval Information Warfare Systems Command and NIWC-PAC with C4ISR installation and integration support both afloat and ashore,” said John Hassoun, VTG president and chief executive officer. “We’re proud of that longstanding partnership and excited about this new opportunity to leverage our growing C4ISR production capabilities in support of the NIEF’s mission.”

The NIWC-PAC NIEF, located at NAVWAR headquarters in San Diego, California, specializes in the rapid design and integration of commercial and government off-the-shelf products for military applications. It also provides environmental qualification testing services for those products and limited- and full-rate production. The facility was modernized in 2019 to better support the design and delivery of advanced information warfare capabilities to the fleet.

VTG will provide the NIEF with procurement, fabrication, and integration of C4ISR end items, including production units, ancillary kits, sub-systems, assemblies, sub-assemblies, modules, and spares. These end items include a full spectrum of C4ISR systems for surface ships, submarines, and shore-based applications.

Navy’s Unmanned Systems Battle Problem Features All-

Domain Sensing



A Vanilla ultra endurance land-launched unmanned aerial vehicle (UAV) undergoes operational pre-flight checks during U.S. Pacific Fleet's Unmanned Integrated Battle Problem (UxS IBP) 21 at Naval Base Ventura County, Point Mugu. UxS IBP 21 integrates manned and unmanned capabilities into challenging operational scenarios to generate warfighting advantages. *U.S. NAVY / Construction Mechanic 2nd Class Michael Schutt*

ARLINGTON, Va.— The Unmanned Systems Integrated Battle Problem (UxS IBP) conducted off the coast of California over the last week featured sensor data exchange and remote sensing in all domains from seabed to space, and involved a variety of scenarios, including swarm attacks by drones and launch and recovery of an unmanned underwater vehicle by a submarine.

Rear Adm. Robert Gaucher, director of the Maritime Headquarters for the U.S. Pacific Fleet, and Rear Adm. James Aiken, commander, Carrier Strike Group Three, and commander of the IBP, spoke about the exercise to reporters during an April

26 teleconference.

“Just yesterday, we successfully teamed air and surface manned and unmanned capability to put [an SM-6 missile] well past over the horizon from [the Arleigh Burke-class guided-missile destroyer USS] John Finn on a target and it struck the target very, very successfully,” Aiken said.

The manned/unmanned chain of events for the missile shoot was totally passive, [without] any active sensor. The target was detected by a combination of manned and unmanned platforms and a space system to locate and identify the target, track it with electronic support measures (ESM) bearings and pass the information to the John Finn, which was able to shoot the SM-6 at range, well beyond line of sight.

The admiral said the vignettes exercised during the IBP included focused warfighter vignettes, an anti-submarine warfare and surface ISR [intelligence, surveillance and reconnaissance] vignette, and an over-the-horizon strike vignette, the latter being the SM-6 event mentioned above.

Unmanned surface and air systems were used to prosecute a submarine-like target. This event included an MQ-9 SeaGuardian UAV dropping sonobuoys and up-linking data after a P-8 maritime patrol aircraft departed station.

In one scenario, a USV obtained an ESM electronic support measures bearing on a surface target, passed the locating data to the information warfare commander, who passed it to the surface warfare commander, who used a swarm drone attack against the target, a surface vessel.

During one event, a submarine was able to launch and recover an IVER-4 UUV using a torpedo tube.

“Being able to do that without divers [is] reducing a ton of risk for our divers to have to go recover ... was a big win,” Gaucher said.

He also said the IVER-4 was able to conduct its own surveillance and reconnaissance and intelligence preparation of the battlespace.

“We were also able to deliver some kinetic effects in support of undersea and seabed warfare,” he said.

Control of unmanned systems during the IBP was conducted variously from a shore site, from ships at sea, or autonomously.

“I know that unmanned can provide me video from overhead,” Gaucher said. “I know I can put a towed array sensor on a medium-sized unmanned surface vessel, and I can control it from the shore for theater ASW. ... I know that I can operate a system in and out of the torpedo tube of a submarine to support seabed warfare.”

“From a [Pacific Fleet] perspective, we were very pleased about how the Integrated Battle Problem came out, in particular with our ability to integrate unmanned [systems] into that battle problem in a contested environment,” Gaucher said, noting that 29 different unmanned technologies were part of the IBP, with about 50% surface, 30% subsurface, and 20% above the surface.

Gaucher stressed that goals for the IPB included using unmanned systems to avoid putting personnel in harm's way and to improve targeting “so we get a better solution when we launch.”

MARAD Awards \$19.6 Million Toward U.S. Shipyard Economic Competitiveness

WASHINGTON – The U.S. Department of Transportation’s Maritime Administration (MARAD) has announced \$19.6 million in grant awards to 31 small shipyards in 15 states through the Small Shipyard Grant Program. The funds will help awardees modernize, increase productivity, and expand local employment opportunities while competing in the global marketplace. Since 2008, MARAD’s Small Shipyard Grant Program has awarded \$262.5 million to nearly 300 shipyards in 32 states and territories throughout the U.S.

“Small businesses are the backbone of the American economy, and small shipyards play a critical role in America’s maritime industry,” said U.S. Secretary of Transportation Pete Buttigieg. “These grants go directly to small shipyards across the country and will help protect and create local jobs, strengthen America’s maritime industry, and bolster our economic security.”

Small shipyards are essential parts of our maritime industrial base and employ thousands of Americans. They strengthen communities along and near our nation’s ports and waterways. Many small shipyards are family-run businesses – and they are all enterprises in which small investments can make big differences. MARAD’s Small Shipyard Grant Program supports economic competitiveness through grants that can be used to purchase equipment or train employees. In addition, the purchase of American-made manufacturing equipment made possible by Small Shipyard grants supports a wide range of jobs throughout our Nation’s manufacturing base.

“These grants will help small businesses do what they do best:

build essential infrastructure while creating long-term jobs for American workers,” said Lucinda Lessley, Acting Maritime Administrator. “Better equipment means increased productivity and more ships moving through our small shipyards – and more ships mean more local jobs.”