



NOVEMBER SIA NEWS

November has been an active month for submarines, even leaving aside the SIA's Annual Dinner, Workshop and AGM!

In this edition, some submarine news from around the world:

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NAVY RE-ESTABLISHES A SUBMARINE PRESENCE IN CANBERRA

The following message was sent by VADM Russ Crane, Chief of Navy (I've cut out the signalese stuff). This is action for which the SIA had been strong advocates since 2004 at least and reverses a policy position taken early in the decade which stripped the Chief of Navy (and hence CDF and the Minister) of timely, contextual advice on submarine matters. The SIA welcomes this announcement.

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SUBJ: ESTABLISHMENT OF THE SUBMARINE CAPABILITY DEVELOPMENT
BRANCH IN NAVY STRATEGIC COMMAND

1. IN LINE WITH GOVERNMENT DIRECTION IN THE WHITE PAPER, NAVY HAS EMBARKED ON A MAJOR REFORM PROGRAM TO IMPROVE THE AVAILABILITY OF THE COLLINS CLASS FLEET AND WHICH WILL ALSO ENSURE THAT A SOLID FOUNDATION IS LAID FOR THE FUTURE SUBMARINE (FSM) FORCE.
2. I HAVE DIRECTED THE ESTABLISHMENT OF THE SUBMARINE CAPABILITY BRANCH (SMCB) WITHIN NAVY STRATEGIC COMMAND (NSC) IN CANBERRA FROM 1 FEB 2010. THE SMCB (10 STAFF APPROX) WILL BE LED BY THE DIRECTOR GENERAL SUBMARINE CAPABILITY (DGSMC) AND WILL BE RESPONSIBLE TO ME THROUGH HNC FOR THE OVERALL DELIVERY OF THE FUTURE SUBMARINE CAPABILITY TO NAVY, NOTING THAT FLEET COMMAND WILL REMAIN RESPONSIBLE FOR FORCE GENERATION OF THE CURRENT SUBMARINE FLEET.
3. BROADLY, THIS CHANGE WILL REQUIRE COMMODORE SUBMARINES TO RELOCATE FROM FBW TO NSC TO BECOME DGSMC. CAPT SM WILL BECOME THE COMMANDER SUBMARINE FORCE (COMSUBFOR) WITHIN FLEET COMMAND AND CO STIRLING WILL ASSUME RESPONSIBILITY AS SENIOR NAVAL OFFICER WESTERN AUSTRALIA (SNO-WA).
4. THE ESTABLISHMENT OF THE SMCB RECOGNISES THE UNIQUE CHALLENGES NAVY FACES IN REBUILDING AND THEN GROWING THE SUBMARINE CAPABILITY TO MEET THE FUTURE FORCE STRUCTURE AND THE STRATEGIC IMPORTANCE OF THE SUBMARINE CAPABILITY WITHIN THE ADF. IT ALSO ACKNOWLEDGES THE COMMAND STRUCTURE NEEDED TO MAKE OUR SUBMARINE FORCE AS EFFECTIVE AS POSSIBLE
5. THE DETAILS OF THIS RESTRUCTURE WITHIN THE SUBMARINE FORCE AND NSC ARE CURRENTLY BEING WORKED BY THE RESPECTIVE STAFFS, WITH THE SMCB EXPECTED TO EVOLVE TO ITS FINAL FORM BY DEC 2010.
6. CN SENDS

BT



GOVERNMENT STANDS FIRM ON SUBMARINES

Australian Associated Press, November 12, 2009

THE Federal Government is not budging on its plan to buy 12 submarines despite the Opposition demanding justification for the plan which could cost about \$36 billion.

Labor's defence white paper, released in April, calls for 12 subs "to defend our approaches".

The Opposition is questioning the number.

"Nobody seems to have any idea as to how much these submarines are going to cost us," Opposition defence science spokesman Bob Baldwin said.

Despite the question marks, Minister for Defence Personnel, Materiel and Science, Greg Combet, was unwavering.

"Twelve was the conclusion coming out of the white paper process and there's no suggestion that we're about to re-write it," Mr Combet said yesterday.

Such a decision would double Australia's submarine force from the current six Collins class subs, which are approaching middle-age and remain plagued with staffing and equipment problems.

Mr Combet said 12 submarines were needed for future challenges, not to tackle current threats.

"In particular, of course, we were projecting forward to around the year 2030 and what would be the force requirements that the Australian Defence Force would have given the security challenges that we may face."



AUSTRALIA PUTS MONEY ON CONVENTIONAL WAR, PLANS NEW SUB FLEET

By Marina Malenic, Defense Daily, November 19, 2009

A plan to upgrade Australia's legacy submarine fleet with 12 new vessels will be the most expensive military program in the country's history, a top Australian military official said yesterday.

"The real headline in the White Paper is the 12 large submarines," Air Vice-Marshal Kym Osley, the head of the Australian defense staff in Washington, said at an event sponsored by the National Defense Industrial Association.

In its 2009 White Paper, Australia's defense department proposed replacing its current fleet of Collins-class submarines, designed by ThyssenKrupp's Swedish Kockums subsidiary and built in Australia. The new fleet will be comprised of large, conventional submarines, according to Osley.

"That will be then our single largest program ever in the history of our country," he said.

He added that Australia remains committed to maintaining a nuclear-free military.

Australia's latest defense White Paper, released this summer, lays out the country's military expenditures through 2030. Unlike the U.S. Quadrennial Defense Review,

which plans a strategy and makes broad suggestions for weapons purchasing, the Australian paper is a spending blueprint.

"This is very much a resource document," Osley explained. "The QDR is...a bit more aspirational."

Unlike the U.S. military, which under Defense Secretary Robert Gates' guidance seems headed firmly in the direction of irregular warfare and unconventional capabilities, Australia is seeking to modernize its conventional arsenals. In addition to the 12 new submarines, the country plans to buy three destroyers, eight frigates, 24 combat helicopters, 10 strategic airlifters, a fleet of fifth-generation fighter aircraft, new artillery systems and all new combat vehicles.

"The threat of conventional armed conflict has not gone," Osley said. "It has receded a bit, but it has not gone, and Australia...has chosen a maritime strategy. We've decided to focus very heavily on maintaining our freedom of operation within our region, focused on maritime forces."

While focusing on conventional capabilities, Australia will still "adapt to the more unconventional approach, which is also something we need to master," Osley added.

For the first time, Australia is also seeking a cruise missile capability, as well as its own satellite program.

"So it's not just about replacing the old, it's actually about ending up with new capabilities," he said.

Osley said the Australian document also anticipates a "more multi-polar era," with power shifting away from the United States and Europe to the Pacific.

"We're seeing, for the first time, the U.S. becoming truly resource-constrained in trying to meet its security obligations and desired security posture around the world," he said.



BRITISH NUCLEAR EXPERT STEPHEN LUDLAM TO HEAD ASC

By Mark Dodd, The Australian, Nov. 23, 2009

A LEADING British expert in nuclear engineering technology, Stephen Ludlam, has been appointed the new head of the Australian Submarine Corporation.

Mr Ludlam, 56, currently president of Rolls Royce Submarines, was selected after a global search for the new head of Australia's only government-owned prime defence contractor, ASC said today.

The appointment comes at a critical time for the Adelaide-based defence shipbuilder, which is about to start construction of Navy's new Hobart Class Air Warfare

destroyers.

ASC is expected to take the lead in construction of the Royal Australian Navy's next generation submarine fleet.

The Defence White Paper blueprint released in May proposed a doubling of the current submarine fleet to 12 bigger and technically more complex boats.

“I am looking forward to building upon the unique skills and expertise already contained within ASC and continue to forge a path for ASC in the Australian naval defence industry,” Mr Ludlam said.

Mr Ludlam has 34 years' experience in the field of naval engineering, holds a Master of Science from Royal Naval College Greenwich and is a Chartered Engineer and Fellow of the Institution of Mechanical Engineers.

Mr Ludlam takes over from acting managing director, Graeme Bulmer, in January.



REPORT: LAX LEADERSHIP LED TO HORMUZ COLLISION

By Andrew Scutro, Navy Times, November 16, 2009

The navigator was listening to his iPod during a critical evolution.

Watchstanders were known to sleep on the job.

Stereo speakers were rigged for music in the radio room.

An informal atmosphere – along with crew complacency, a “weak” command and inferior submariner skills – are named as contributors to the March 20 collision between the attack submarine Hartford and the amphibious transport dock New Orleans in the Strait of Hormuz.

And according to a heavily redacted 102-page Judge Advocate General Manual investigation obtained by Navy Times through a Freedom of Information Act request, what turned into a major embarrassment for the submarine fleet was entirely “avoidable.”

The collision happened just after midnight in calm seas as Hartford was at periscope depth and southbound, crossing the strait bound for a port call in Jebel Ali, United Arab Emirates.

New Orleans – 70 days into its first deployment – was westbound, exiting the surface transit lane of the strait. The state-of-the-art gator was entering the Persian Gulf as part of the Boxer Amphibious Ready Group.

The ships crashed as they intersected. Fifteen sailors on Hartford were hurt, none more seriously than during a typical swim call, according to the boat’s corpsman. No

one on New Orleans was injured.

The crew of New Orleans “bears no fault” for the accident, the report said.

When it was all over, Hartford would take one month to limp home to Groton, Conn., on the surface, its captain and chief of the boat both fired. Today, Hartford is still undergoing extensive repairs to its bent sail, internal components and damaged bow planes at General Dynamics Electric Boat in Groton. Industry experts estimate the bill to be more than \$100 million.

New Orleans suffered a 16-by-18-foot gash in its hull. It would spend 53 days in Bahrain undergoing \$2.3 million in repairs while stranding embarked leathernecks from the 13th Marine Expeditionary Unit.

Problems At The Top

Blame for the whole debacle lands squarely with a command team on Hartford that tolerated an “informal” atmosphere on the ship, the report said.

Cmdr. Ryan Brookhart was detached for cause and chief of the boat Master Chief Electronics Technician (SS) Stefan Prevot was reassigned to Submarine Squadron 4 in the aftermath. The navigator, executive officer and weapons officer underwent nonjudicial punishment, as did 10 sailors. Also, administrative action was taken against three direct support element members assigned to Naval Information Operations Command in Georgia as well as a fleet intelligence specialist based near Washington, D.C. The report did not explain what role they played.

The report’s final endorsement, by Fleet Forces Command head Adm. John Harvey, called the accident the result of “nearly 30 tactical and watchstander errors” in the hour before the collision. He also noted that the command failed to hold subordinates accountable, “and a high price has been paid for that shortcoming.”

Harvey also directed the submarine force to review all collisions back to the attack sub Greenville’s fatal crash into a Japanese fisheries training boat in 2001 near Hawaii.

Vice Adm. Jay Donnelly, Submarine Force commander, spoke candidly about the mishap Oct. 28 during the annual Naval Submarine League meeting in McLean, Va.

He said the crew had just finished an intense operational phase of its deployment and “everybody let down their guard” for what was actually one of the most challenging phases, crossing the strait at periscope depth.

He also noted that more or better technology would not have helped the situation, as the sub crew knew New Orleans and another ship were nearby

A Bigger Issue

The collision illustrates the force’s larger problem with contact management. An internal message sent by Submarine Force Pacific commander Rear Adm. Douglas McAneny less than a month after the collision urged commanders and commodores to boost crews’ ability to track surface contacts.

“Over several months” prior to the incident, hundreds of watchstanders were tested in

their ability to understand how to analyze the movement of surface contacts. The exams yielded results of 10 percent to 15 percent passing grades among enlisted watchstanders and 60 percent of officers.

“Given the attention I have personally placed on submerged contact management in briefing the waterfronts, this is unacceptable,” McAneny wrote in the message obtained by Navy Times.

Not Up To Standard

At the time of the collision, the sub was southbound at periscope depth, periodically raising and lowering its periscope.

When the ships collided, the New Orleans crew felt “a shudder and rumbling.” That bridge team slowed to 3 knots and launched a small boat to look for damage. The big amphib had flooding in ballast and fuel tanks and listed “1.5 degrees to starboard.”

On Hartford, the crash caused the door of the control room to be jammed shut by a battle lantern, a fuel leak in the machinery room, and “light smoke” in that space and in the torpedo room.

The bow planes were not working and the periscopes would not rise. The towed array was retrieved and baffles cleared before conducting an emergency blow and surfacing 3,000 yards from New Orleans. It took the crew nearly four hours using “wedges and a portable hydraulic jack” to pry open hatches up to the bridge.

Blame is on Brookhart for failing to plan the “strait transit and crossing evolution,” for failing to communicate the plan, and leaving watchstanders without “the heightened risk that should have been foremost on everyone’s mind.”

But the watchstanders were not up to standard to begin with, according to the report.

Control room understanding of contact management was found to be poor enough that crewmembers “routinely failed to critically evaluate the validity” of computer-generated contact information with “raw sensor data.”

But as McAneny urged commanders to get their crews up to standard, the causes of the collision point to leadership. Brookhart, the executive officer and COB were together tagged with setting a command climate that lacked a “questioning attitude” that is expected in the submarine force and for fostering a “general level of complacency.”

It was felt by even the youngest sailors. Helmsmen – always the newest crew – told investigators they often would “slouch in their seats with one hand on the controls,” and would “take off their shoes while driving the ship.”

Sailors also reported a lax attitude in the sonar division about taking breaks.

On the night of the crash, sonar operators chatted “for the majority of the time [in the hour before] the collision.” An officer of the deck did not look through the periscope prior to the collision after taking over contact management duties.

The navigator, off-watch, was found to have been taking an engineering exam in the

wardroom “while listening to his iPod,” despite the hazardous evolution underway. Brookhart was never in the control room during any time crossing the strait, the investigators found.

Prior to the accident, speakers had been installed in the ultra-sensitive radio room “that allowed music to be played from an iPod while on watch. This was hidden from the Chain of Command.”

Perhaps most shocking was this revelation: “Many crewmembers stated there were numerous ‘known’ sleepers [five specific names were reiterated by the majority of those crewmembers interviewed]. Those personnel would routinely fall asleep [‘nod off’] on watch, and no disciplinary action was taken.”

Two of the known sleepers were on watch during the collision, the report states.

The investigating team does make a point at the end of the report to say most of the sailors on the ship were of an “absolutely superb caliber” now “hungering for effective leadership” and “eager to restore their ship’s standing.”



SUBSCOL DEDICATES SUBMARINE ESCAPE TRAINER

By: William Kenny, The Dolphin, November 19, 2009

GROTON, Conn. – Naval Submarine School cut the ribbon on its newest trainer, the Submarine Escape Trainer, and rededicated it to the achievements and memory of Vice Admiral Charles "Swede" Momsen in ceremonies at Naval Submarine Base New London, Nov. 10.

Helen Hart Momsen, granddaughter of Vice Adm. Momsen was an honored guest and assisted in the ribbon cutting formally opening the new trainer. Momsen was an American pioneer in submarine rescue and invented the underwater escape device called the Momsen Lung, a staple of submarine escape for decades, for which he received the Distinguished Service Medal in 1929. In May 1939, he directed the rescue of the crew of USS Squalus (SS 192).

The Honorable Joe Courtney, Congressman Connecticut Second District, offered in his remarks that "This escape trainer not only teaches submariners how to escape a submarine in the event of the unexpected, but allows them to build up the confidence they need by actually allowing them to do it in a realistic - and safe - environment.

"We all know that the significance of this cannot be overstated - experiencing this kind of training in realistic scenarios can make the difference literally between life and death in an emergency."

And Rear Adm. Paul J. Bushong, Commander, Submarine Group Two, noted to an

audience of both local community leaders and waterfront Sailors, "Submarine Escape is a necessary skill that all of us hope to never need and to never need to use, but this facility and its talented staff are our guarantee that should the need arise, tomorrow's Undersea Warriors are ready for any challenge in every environment in which our Submarine Force operates, today and tomorrow.

"It has been a long journey from "Swede" Momsen's diving bell to this facility and the Submarine Escape Immersion Equipment we use today. But it's all part of our relentless dedication to training innovation and excellence in support of the world's finest submarine service."

Construction of the Submarine Escape Trainer began in November 2005. At the core of the eighteen million dollar facility is a 20-foot diameter, 40-foot high, 84,000 gallon pool atop escape trunks called the LOT (Lock-Out Trunk) and the LET (Logistics-Escape Trunk) that simulate conditions a submariner would experience during an escape from a submerged submarine.

Annually about 3,000 Sailors (officer and enlisted) will receive training in the two-day emergency escape course (800 officers and 2,100 enlisted).

Established in 1916, Naval Submarine School is often called "the center of submarine training excellence." Nearly 30,000 officers and enlisted Sailors graduated from 198 courses of instruction, ranging from Basic Enlisted Submarine School through Prospective Command Course, during calendar year 2008.



ACACIA RESEARCH AND LOCKHEED MARTIN TEAM UP FOR SEA 1000

Transworld News, November 10, 2009

Lockheed Martin Australia of Canberra and Acacia Research, Ltd. of Adelaide have teamed up to pursue the combat system integrator role for the Royal Australian Navy's Future Submarine project. The project has been code named SEA 1000. As part of the Dept. of Defense project, 12 modern submarines will replace the current six existing Collins-class boats. The project is expected to be the largest ever single defence.

The companies are working together to integrate some of Acacia Research's applied research into Lockheed's generic combat systems architecture. Lockheed will develop and integrate an advanced combat system for the new submarine class, serving as prime contractor and systems integrator.



LOCKHEED MARTIN WANTS TO PUT COMMON RADIO ROOM INTO AUSTRALIAN SUBS

Defense Daily, November 19, 2009

Lockheed Martin is looking to market its Common Radio Room (CRR) to U.S. partner nations, with the first effort to demonstrate the system to the Australian Navy, a company official said.

CRR has been adopted by the Navy for use on Seawolf, Virginia, and Ohio-class SSBN and SSGN submarines and CRR is being incorporated onto Los Angeles-class boats, Wendy Underwood, executive director for CRR, told Defense Daily Friday.

"It's saved the Navy tons of money to get a common approach," she said. "[The Navy] is projected to save \$750 million over the submarine classes."

Having a common radio room enables sailors to move from one submarine class to the next without having to relearn operating that particular boat's communications equipment, Underwood noted.

"The whole logistics trail is common, managed out of one program office...[they do] block upgrades," she said. "Some amazingly powerful things the sub surface Navy has achieved."

She added the Navy has recently gone through Preliminary Design Review in the last two months for the Los Angeles-class boats to be outfitted with CRR.

Since incorporating CRR onto submarines, Lockheed Martin has taken a variant of the system and installed it on the USS Freedom (LCS-1), she said.

The Navy is now looking at a pilot version of the automated radio room approach for use on DDG-51s, Underwood noted.

"To date, there is no decision on a communications upgrade" to any of the destroyers or cruisers undergoing Aegis modernization work, she added.

In the coming weeks, Brian Nutt, business development for the CRR program, will head to Australia to look at the potential of incorporating the system into that country's Collins-class submarines.

"We are looking at comms upgrade for the Collins class as well as potentially for their future follow on...the C-1000 program for the submarines that is in the early planning stage," he said. "We are marketing internationally. It isn't anywhere yet, but we are trying to change that."



'GRAND OLD LADY' SAILS INTO PLYMOUTH FOR THE LAST TIME

Plymouth Herald (United Kingdom), November 10, 2009

A CLOUDY sombre sky with bursts of sunshine reflected the mood as city submarine HMS Trafalgar returned to Devonport for the last time.

The Trafalgar-class nuclear-powered boat is being decommissioned after 26 years of active service.

In her Royal Navy career she has seen her fair share of excitement and controversy. But yesterday at Devonport Naval Base, officers focused on the positive points.

Her Commanding Officer, Commander Charlie Shepherd, described the event as being the “end of an era”.

“There is a mix of sadness and pride,” the 48-year-old said yesterday. “She has been in service for 26 years and today was her last day at sea. It is the end of her career at sea and the end of an era. It is clearly a very emotional day and it is sad that such a grand old lady is ending her life.

“The ship’s company is like a big family which will now be broken up in the coming weeks and months. The majority will be serving on other submarines in the fleet.”

Cdr Shepherd said the submarine had achieved a great many things since being commissioned in May 1983. He cited one achievement as her being the first British nuclear-powered submarine to circumnavigate the globe, a feat she achieved in the early 1990s.

He also proudly boasted that it was the first British submarine to fire on Afghanistan, blasting a Taliban training camp with a Tomahawk guided missile in October 2001.

Abel Seaman (Sonar) James Launce, from St Budeaux, has been serving on HMS Trafalgar since March 2003.

The 29-year-old said: “It is a sad day coming in for the last time. The lads are feeling it. “I’ve been on board since 2003 and seen a lot of people come and go – now it’s her time to go.”

He said he enjoys being a submariner.

“It’s just different for the surface fleet,” he added. “It’s the thrill of the job that I like. It’s like a big family.”

The boat’s Executive Officer, Lieutenant Commander Scott Johnson, from Cornwall, added: “This is very much the end of an era. It was quite emotional for us coming home for the last time and seeing the flotilla of boats and the guard of honour.”

HMS Trafalgar, an 85.4m attack submarine, has recently returned from a successful five-month deployment east of Suez.

Like other submarines in her class she weighs 5,200 tonnes (dived) and is capable of carrying Spearfish torpedoes and Tomahawk cruise missiles.

She is the first Trafalgar-class submarine to be decommissioned.

She will now be moored up at Devonport Naval Base for the foreseeable future before being prepared for being laid up. There is the chance that she could be cut up and dismantled in Plymouth at a later date.

The Ministry of Defence has said that Plymouth is one of two sites being considered for the controversial Submarine Dismantling Project. An official decommissioning ceremony will take place on December 4 to mark the submarine's exit from the fleet.

HMS Trafalgar is one of seven Trafalgar-class attack submarines which, together with the Faslane-based Swiftsure-class boats, form the backbone of Britain's submarine strike force.

HMS TRAFALGAR A colourful career

NOT many submarines can boast such a colourful and controversial career as HMS Trafalgar.

Since being commissioned in May, 1983, the nuclear-powered vessel has hit the headlines around the globe – for positive and negative reasons.

Arguably her finest hour came in October 2001, when she teamed up with another Devonport submarine, HMS Triumph, to fire Tomahawk missiles at suspected terrorist targets in Afghanistan. The firing on the Taliban training camp marked the start of Britain's direct involvement in the war on Afghanistan.

On November 6, 2002, more than £5million worth of damage was caused to HMS Trafalgar when she struck the seabed during a training exercise.

Two Royal Navy submarine commanders were reprimanded following the incident close to the Isle of Skye.

The incident injured three sailors and caused the entire crew to fall over. She went into refit for 15 months.

In April 2004, 11 crew members on HMS Trafalgar walked off in protest over a host of alleged safety problems, including faults in her nuclear reactor, escape hatches and emergency rescue equipment.

At the time Defence Minister Lord Bach denied there was a mutiny aboard the boat.

And in November last year an investigation was launched after 280 litres of radioactive coolant spilled into the River Tamar from HMS Trafalgar. The Royal Navy confirmed the water, likely to have been contaminated with tritium, poured from a burst hose as it was being pumped from the submarine.

The submarine was alongside at Devonport, after undergoing routine maintenance.

Asked about the boat's past its current Commanding Officer, Commander Charlie Shepherd, said yesterday that he preferred to look at the "finer points" of HMS Trafalgar's career rather than the "chequered parts".

"She has had her ups and downs, but any warship will have had that," he added. "I think she will be remembered more in a positive light."



UK: NEW HUNTER KILLER NUCLEAR SUBMARINE TAKES TO THE SEAS

Seventh Space, November 16, 2009

The biggest and most powerful attack submarine ever built for the Royal Navy - Astute - took to the seas this weekend.

Astute set sail from Barrow-in-Furness to start her first set of sea trials and is now heading to her homeport of Faslane on the Clyde in Scotland.

Measuring nearly one hundred metres from bow to stern, Astute is longer than ten London buses. When fully stored, she will displace 7,800 tonnes of sea water, equivalent to 65 blue whales.

The Astute submarine has the latest stealth technology, a world-beating sonar system and is armed with 38 torpedoes and missiles - more than any previous Royal Navy submarine. She will be able to circumnavigate the entire globe while submerged and advanced nuclear technology means that she will never need to be refuelled.

The Minister for Defence Equipment and Support, Quentin Davies, said:

"This is a significant milestone for Astute as she sails for the first time towards her homeport of Faslane. The Astute class of submarines will deliver a step change in capability for defence in terms of anti-submarine and anti-surface warfare, protecting the deterrent, and providing land attack and intelligence gathering. Astute will now begin a set of sea trials ahead of her full acceptance with the Royal Navy next year.

"I would like to pay tribute to both the MoD and BAE Systems Submarine Solutions staff who have worked so hard to achieve this remarkable feat of engineering.

DE&S Director Submarines, Rear Admiral Simon Lister, who has overseen the final stages of the submarine production and preparation for sea trials, said:

"Building a nuclear submarine is a huge challenge and demands the highest standards of design, engineering and manufacturing to ensure she can safely perform her demanding duties.

"Submarine building combines a huge variety of elements: sometimes it is more like blacksmithing manipulating the steel of the hull, and sometimes it like brain surgery, dealing with advanced technology and performing tasks to an almost unbelievable level of accuracy.

"Astute represents the sum of thousands of individual efforts, and everyone involved in her creation can be proud."

Astute is expected to arrive in Faslane later this week.



BAE HANDS NEW NUCLEAR SUBMARINE TO THE ROYAL NAVY - FOUR YEARS LATE

By Amy Wilson, Daily Telegraph (United Kingdom), November 15, 2009

The handover of the first British submarine to provide every crew member with his own bunk might seem like an excuse for noisy celebration on board HMS Astute, but a nuclear submarine's *raison d'être* is silence and stealth. So by the time you read this, she may well have slipped silently from her moorings at Barrow-in-Furness and be heading for her new home at the Faslane naval base on the west coast of Scotland.

The exact launch date for the start of Astute's sea trials depends on the weather, and is not disclosed for security reasons, but the submarine was being loaded up with fresh food at the end of last week, and her departure seemed imminent.

The captain of Astute, Commander Andy Coles, was champing at the bit to see what his new vessel will be capable of on its voyage up the west coast, but he acknowledged the delays which beset the project in its early years and led to the long gap since the Navy took on a new class of submarine.

Astute's specifications are heaven for lovers of big numbers – it is 97m long, the equivalent of 10 London buses, and weighs 7,400 tonnes compared with the 5,000 tonnes managed by its predecessor, the Trafalgar class. It has the biggest "ears" of any sonar system in service today, with the processing power of 2,000 laptops. The nuclear reactor which drives the propulsion system is roughly the size of a dustbin but will last the 30-year life of the boat without needing to be replaced.

But there are some other big numbers to bear in mind – the first three Astute class submarines (HMS Astute, Ambush and Artful) cost the Government £3.8bn, according to last year's National Audit Office report, compared with an initial contract for £2.58bn. That report also showed the project was 47 months late, with an original in-service date for Astute of May 2005.

What caused this four-year delay? The end of the Cold War and the gap between designing the Trafalgar class submarines meant a lot of nuclear submarine-building experience had disappeared, and contractor BAE Systems struggled with Astute's computer-aided design. Eventually, in 2003, the Ministry of Defence had to promise more money and help was enlisted from US submarine builder Electric Boat, owned by General Dynamics.

So finally in November 2009, Astute is starting 18 months of sea trials. Rear Admiral Simon Lister, the Navy's director general of submarines, insists Astute will be an "asset" before the end of that period.

The Astute class submarines are being built at BAE Systems' huge yard at Barrow,

which employs 5,000 people in the Cumbrian town. The company and the Navy have an order from the Ministry of Defence for a fourth boat, HMS Audacious, and are in negotiations over numbers five and six.

Seven Trafalgar class submarines are due to be withdrawn over the coming years, and seven Astute vessels were planned to replace them.

"It's our intention to purchase seven Astute class submarines," said Rear-Adml Lister. Like all large defence projects, the Astute boats not yet under contract could be at risk from the outcome of the Government's planned strategic defence review. "They will be a huge improvement in capability," said Rear-Adml Lister. "The issue in the strategic defence review will be which capability this country wishes to fund."

With the Army at full stretch fighting insurgents in landlocked Afghanistan and the Ministry of Defence's coffers distinctly empty, what would be the justification for spending billions on nuclear submarines?

"The surveillance capability is very important in carrying out anti-piracy and anti-terrorism at sea," said John Hudson, managing director of BAE's submarine business. "The key thing is stealth. A submarine can go in, do something, then leave, and you never know it's been there." During the Cold War, submarines were used to tap telephone cables, and at present, there is a British submarine somewhere "east of Suez" every day of the year.

HMS Astute has the capacity to send out a launch and recover personnel, although for security reasons neither BAE or the Navy would go into detail. There is also an access hatch for special forces troops.

The "quantum leap" in Astute's capability also has a more human side. One of the benefits of the submarine being so much bigger than its predecessors is that her crew of 98 men will be the first in the Navy to have their own beds. Submariners at present work round the clock and have to "hot bunk", or share a bed with someone on the opposite shift pattern, one sleeping while the other one works.

But conditions are still hardly luxurious. The captain is the only man who has his own room and wash-hand basin. The bunks for everyone else are stacked three high, with the middle bed the favoured choice – the top one is harder to get in to and the bottom one means being close to people's feet, which after 90 days without fresh air is not a desirable place to be.

Each submariner has one small locker to keep all his worldly goods in during the three-month tours. The invention of the Sony Reader electronic book has transformed the life of one bibliophile submariner, who previously filled his tiny locker with novels and kept his clothes under his mattress. There are five showers and five toilets for the sailors. Astute is a huge improvement, but it will still be a special kind of person who can live on a submarine.

A final piece of information that might disappoint devotees of Second World War films – the Astute is the first British submarine not to use an optical periscope. Instead of

using what one of Astute's submariners described as a pair of glasses on the end of a pole, fibre-optic cables will stream footage down to TV screens.



BRITAIN WILL NOT BE PROTECTED AROUND THE CLOCK WITHOUT FOUR NEW TRIDENT SUBMARINES, WARNS NAVY CHIEF

Daily Mail, November 18, 2009

Britain's round-the-clock nuclear deterrent can only be guaranteed if the Government agrees to build four new Trident submarines, the head of the Royal Navy said today. Prime Minister Gordon Brown and the Conservatives have proposed cutting the UK's fleet of nuclear missile-carrying submarines from four to three.

But Admiral Sir Mark Stanhope, the First Sea Lord, warned this risked breaking the 24-hours-a-day, 365-days-a-year patrol cycle that is currently maintained.

The Navy is investigating whether it would be feasible to rely on three submarines, he told The Times.

At any time one of the boats would be in refit and another would be coming out of or preparing for refit, leaving only one available for operational service, he said.

'If there were to be a major incident on board, such as a fire, this could cause the continuous patrol cycle to be broken.'

Government plans to update and replace Britain's Trident nuclear weapons system, including the four Vanguard class submarines that carry the missiles, were approved by MPs in 2007.

But the £20 billion bill for the programme has come under the spotlight as ministers search for areas where money can be saved to repair the UK's battered public finances.

Sir Mark agreed that the current conflict in Afghanistan had to take priority for defence resources but warned that it should not be the basis of all planning.

He told The Times: 'When Afghanistan is consigned to the history books there will still be a whole lot of different issues in the future which we will have to deal with, such as the security aspects arising from climate change and energy supplies, and 95 per cent of Britain's trade goes by sea.'

In September, Defence Secretary Bob Ainsworth admitted that Labour might cut the number of Vanguard class submarines that carry the Trident nuclear missiles from four to three.

He sought to justify cuts by claiming that the public do not want to see a higher defence budget - at odds with polls that showed that voters overwhelmingly want more

support for the Armed Forces.

Then Shadow Chancellor George Osborne revealed that a Tory government would consider slashing spending on two new aircraft carriers for the Royal Navy, the Eurofighter project and the A400M transport aircraft.

Probed about Mr Osborne's comments at the time, David Cameron said: 'He was asked the question, how easy is it in Opposition to get the details of defence contracts, and how much do you know, and what George said in his answer is basically it is very difficult in Opposition to get these details, and you don't know very much, and it is very difficult to find out about these matters.

'That is one of the difficulties we have to overcome in setting out more about public spending, because particularly in the areas of procurement, it is incredibly difficult to get to the bottom of programmes within the defence department.'

He added: 'It only highlights the need for a proper strategic defence review. We have said we will hold that if we win the election, we will get on and do that very quickly.'



INDIA'S N-SUBMARINE TO BE COMMISSIONED BY RUSSIANS

Press Trust of India, November 16, 2009

In spite of the delay in acceptance trials due to stormy sea conditions, Russian Navy is going ahead to commission the Indian Navy's Akula-II class nuclear submarine Nerpa by the year end, a top official said today.

"The Nerpa, built by the Amur Shipyard will be delivered on time in December this year," Governor of Khabarovsk Territory Vyacheslav Shport announced today.

The submarine is due to be handed over to India by March next year on lease.

After its commissioning, the Russian Navy will train Indian Navy personnel on operationalising the submarine which would join the Indian Navy fleet after undergoing user trials.

Earlier, the Director General of Amur Shipyard, located in Komsomolsk-on-Amur city of the Khabarovsk Territory, had said the acceptance trials were postponed for about a week due to rough weather on Pacific Coast.

"December 2009 is the delivery deadline. There are no serious grounds for the delay in state acceptance trials, the normal process of preparations for them is underway. Didn't left (docks) on November 15, would set sails in coming days," Governor Shport was quoted as saying by RIA Novosti.

According to earlier reports after its formal commissioning by the Russian Navy the Nerpa would be rechristened INS Chakra and handed over to India in March next on 10-year lease under the \$650 million deal.



TURKEY TO BUY SUBMARINES AT REDUCED PRICE

By Ümit Enginsoy, Hürriyet Daily News, November 18, 2009

ANKARA – Turkey's Navy will buy six modern submarines to be built by Germany's HDW shipyards at a price nearly 20 percent lower than what the Germans had originally offered, procurement officials said.

The Defense Industry Executive Committee, Turkey's top decision-making body on defense procurement, selected HDW over its French and Spanish rivals in the summer of 2008. At the time, the program's expected cost was announced to be nearly 2.5 billion euros.

After yearlong price and work-sharing negotiations between the Undersecretariat for Defense Industries, Turkey's procurement agency, and the German company, a final contract was signed in July.

No price was specified in the public announcements for the contract at the time, but Hürriyet Daily News & Economic Review found out that the cost of the program was around 1.96 billion euros, which is nearly 500 million euros lower than the original price.

Turkish officials said they were also content with the work-sharing arrangement, which enabled Turkey's local companies' involvement in the deal, although no details were clear.

The Kiel-based HDW, a subsidiary of the German conglomerate ThyssenKrupp, will now build six modern U-214 type submarines with Turkish partners.

The submarine program will be Turkey's second-largest defense modernization project following a planned \$11 billion deal to buy at least 100 next-generation F-35 Joint Strike Fighter Lightning II aircraft for the Air Force. Ankara hopes the new, non-nuclear U-214 submarines will start operating in 2015.

Situation in Greece

While HDW cleared the way for the Turkish program, its similar efforts for Greece have recently faltered. HDW and its Greek subsidiary, Hellenic Shipyards, in late September canceled their submarine programs with the Greek government, citing Athens' 524 million euros outstanding debt to the companies.

In 2006, HDW and Hellenic Shipyards delivered the first of four Class 214 submarines to Greece. But, Athens did not accept the vessel, citing technical failures. It is not clear at this point how the dispute can be resolved.



THE CANADIANS HAVE UNMANNED SUBMARINES CHARTING THE ARCTIC

Greenville Family, Nov. 21, 2009

Amazingly the Canadians have recently secured a piece of technology which no other country in the world currently owns. Remote controlled submarines are new to the world and basically they are submarines which do not need people on board to operate them. This is an excellent idea as oxygen does not need to be provided for anything and the submarine can be controlled at a base where a lot of people can see exactly what is going on.

This has come into the equation because many countries are in argument over who has access to the Arctic. This argument includes USA as well as Canada, Russia, Norway and Denmark. The only thing they seem to be arguing over is oil. Because of global warming the ice around the Arctic has slowly been melting away leaving previous areas where nothing could venture into, accessible. This of course means that there will more than likely be some untapped natural resources down there that the arguing countries will want to snap up for themselves.

The oil giant USA is obviously going to be involved in this as their oils supplies are running extremely low and need to find other means to supply the country with electricity before time runs out. Ultimately oil would provide the USA with more time to develop newer means of making electricity which of course is why they are so interested in it. Probably the real reason is more likely to be that USA are absolutely power hungry and simply want more money. If you look at the Iraq war as an example; was it not just a failed ploy to get at Iraq's oil supply?

Of course Canada itself is a marvellous place to visit so why not take an Alaskan cruises and jet off on one of those Canada tours today? There may be more in your holidays to Canada than you might first think.



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