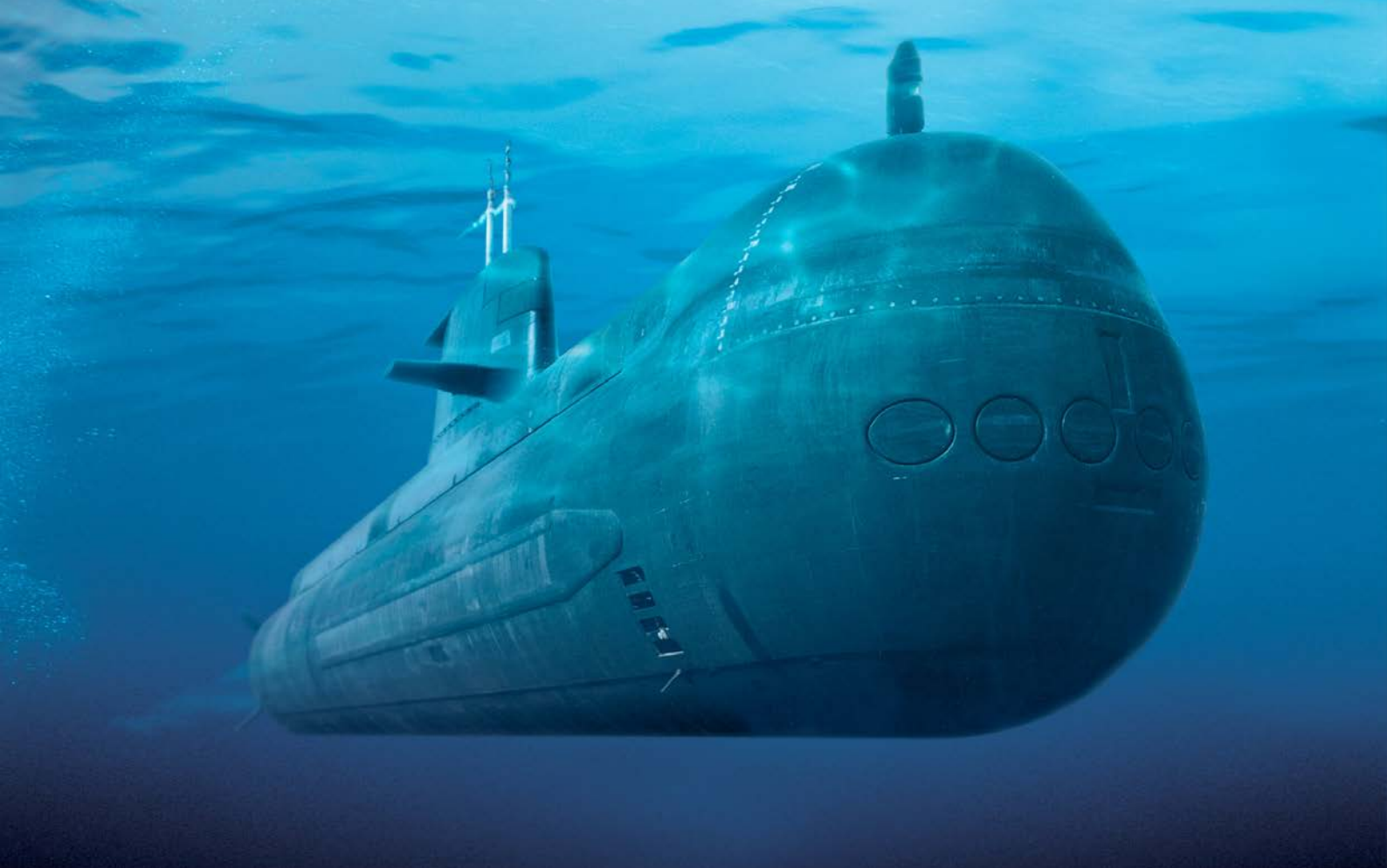


# COLLINS CLASS SUBMARINES: FACTS AND FEATURES



Photos courtesy of the Royal Australian Navy



The Collins Class project was established in 1982, with design work commencing in 1987.

Replacing the Royal Australian Navy's (RAN's) Oberon Class submarines, the large, long range and stealthy Collins Class design was required to meet the unique requirements of the RAN.

The submarines would need to travel great distances, operate in varying environments, deploy state-of-the-art weapons and be ready to perform anti-submarine, anti-ship and intelligence-gathering missions. Acting as a strategic deterrent to potential adversaries, they would help protect Australia through their very existence.

ASC delivered the Collins Class submarines to the Royal Australian Navy between 1996 and 2003. They were the first submarines to be built in Australia.

Based on the Type 471 design from Swedish submarine maker, Kockums, the Collins Class were considered the most sophisticated conventional submarines in the world, packed with high level technological and performance capability.

## AUSTRALIAN CONSTRUCTION AND SUSTAINMENT

Construction of the first Collins Class submarine, HMAS *Collins*, commenced in 1990 in South Australia, with the vessel delivered to the RAN in 1996.

ASC exceeded the contracted minimum of 70 per cent Australian industry content during the build and increased Australian content in sustainment to levels exceeding 92 per cent, developing a robust Australian capability by prioritising strong supplier relationships and providing comprehensive supply chain support.



### SPECIFICATIONS

Length:	78 metres
Diameter:	8 metres
Displacement:	3,000 tonnes
Propulsion:	Diesel-electric
Crew:	42, including six officers and 36 submariners
Weapons:	Mk48 heavyweight torpedoes and sub-harpoon missiles Submarine

### KEY QUALITIES

Diesel-electric propulsion
High capability battery, long range and high endurance
High performance hull form, automated controls and exceptional manoeuvrability
High shock resistance, optimal noise suppression and low magnetic signature
State-of-the-art combat system
Efficient weapons handling and discharge systems

### SUBMARINE OUTFITTING STATISTICS

Piping	23,500m
Major cable lengths	7,000
Cable connections	200,000
Cable	75,000m
Batteries	400 tonne

### FEATURES

The Collins Class submarines are a crucial asset of the Australian Defence Force, as an intelligence-gathering platform during times of peace and a forceful opponent in war.

As near to noiseless as technology can achieve, the six submarines - HMAS *Collins*, *Farncomb*, *Waller*, *Dechaineux*, *Sheean* and *Rankin* - strike a balance between innovation and proven technical superiority.

The submarines are the most complex military vessel built in Australia to date. With more than 3.8 million parts each, the submarines are ten times more complicated than a frigate, even though both are approximately 3,000 tonnes displacement. More than 33,000 drawings and 5,000 work orders were produced before the built process began, and once work started, each submarine took 2.5 million hours to assemble.

As platform system integrator managing the fleet's sustainment, ASC works with its partners to keep the submarines at the cutting edge of technology. Key system upgrades have included new sonar, weapons, control systems and more, ensuring the continuity of Australia's formidable submarine capability.

The agile Collins Class submarines manoeuvre via four control surfaces at the rear of the submarine, which are individually actuated to provide superior manoeuvrability and inherent redundancy.

Packed with advanced technological and performance capability, the boats are deep-diving and can travel at speeds greater than 20 knots (submerged) and 10 knots (surfaced).

The submarines have six forward torpedo tubes and are able to carry up to 22 torpedoes or anti-ship missiles, or up to 44 mines, in place of torpedoes. They are able to employ sophisticated countermeasures.

# NAMING THE COLLINS CLASS FLEET

The six-submarine Collins Class comprising HMAS *Collins*, HMAS *Farncomb*, HMAS *Waller*, HMAS *Dechaineux*, HMAS *Sheean* and HMAS *Rankin* achieves an optimum match between innovation and proven technical superiority.

The names of the submarines commemorate six members of the RAN who served their country with distinction.



## HMAS COLLINS

The submarine is named after Vice Admiral Sir John Augustine Collins KBE CB RAN. During his tenure as Captain of HMAS *Sydney* (II) in World War II, Collins led his men to victory in the Mediterranean against a formidable enemy, sinking an Italian destroyer and two cruisers in 1940. In June 1944, in recognition of his valuable service, he was made a Commodore 1st Class and appointed Commander of the Australian Squadron.

On 21 October 1944, while taking part in landings in the Philippines, his flagship - HMAS *Australia* - was attacked by Japanese suicide aircraft which struck and critically damaged the bridge. Collins was severely injured in this attack and was evacuated back to Australia.

In 1947 Collins was promoted to the rank of Rear Admiral, becoming one of the first graduates of the Royal Australian Naval College to attain flag rank. In February 1948 he assumed the appointment of First Naval Member of the Australian Commonwealth Naval Board and Chief of Naval Staff, a post which he retained for a record seven years until he retired on 23 February 1955.

Launched 28 August 1993

Commissioned 27 July 1996

## HMAS FARNCOMB

The submarine is named after Rear Admiral Harold B Farncomb CB DSO MVO RAN who distinguished himself in action during World War II.

He commanded HMAS *Canberra* in 1941 when the ship forced two German raider support ships to scuttle while on Indian Ocean patrol. Later, aboard HMAS *Australia*, he saw action in the Coral Sea, Guadalcanal, the East Solomons, Arawe and Cape Gloucester.

He assumed temporary command of His Majesty's Australian Squadron when Commodore Collins was wounded aboard HMAS *Australia* at Leyte in 1944. He commanded the Squadron in operations at Corregidor, Brunei and Balikpapan.

Launched 15 December 1995

Commissioned 31 January 1998





## HMAS WALLER

The submarine is named after Captain Hector Waller DSO and Bar who, in 1942, was Commander of the cruiser HMAS *Perth* that was part of a combined Allied force when it was ambushed by the Japanese. All except HMAS *Perth* and USS *Houston* were sunk.

Later, the two ships were intercepted by a Japanese invasion fleet escorted by two cruisers and 12 destroyers. Enormous damage was inflicted on the Japanese fleet.

Waller ordered HMAS *Perth* be abandoned as the Japanese closed in. HMAS *Perth* was sunk with her captain, but not before he had fired two torpedo tubes at the convoy. USS *Houston* was sunk shortly afterwards.

Launched 14 March 1997

Commissioned 10 July 1999

## HMAS DECHANEUX

The submarine is named after Captain Emile Dechaineux, the Commanding Officer of HMAS *Australia* during the latter stages of World War II.

On the morning of 21 October 1944, Australia was part of a bombardment force supporting the Allied landing at Leyte in the Central Philippines. During the battle, a Japanese dive-bomber was engaged and hit by HMAS *Australia* and HMAS *Shropshire*. At first, the aircraft appeared to fly away from the ships, but it subsequently turned and dived into HMAS *Australia*, hitting the foremast and causing a large explosion and intense fuel fire.

Captain Dechaineux died of wounds received in the attack and was subsequently awarded the Legion of Merit (Degree of Officer) by the United States Government.

Launched 12 March 1998

Commissioned 21 February 2001



## HMAS SHEEAN

The submarine is named after Ordinary Seaman Teddy Sheean, who was lost when HMAS *Armidale* was sunk on 1 December 1942 off the Timorese coast.

HMAS *Armidale* had survived two days of bombing before being struck by a Japanese aerial torpedo. During the action Ordinary Seaman Sheean was wounded and, rather than abandoning ship with the rest of his shipmates, he strapped himself to the aft Oerlikon Gun and continued to fire at the attacking Japanese aircraft until HMAS *Armidale* sank.

Sheean was mentioned in dispatches for his bravery.

HMAS *Sheean* is the only Australian naval vessel to be named after a sailor and the submarine continues to maintain strong ties with Ordinary Seaman Sheean's hometown of Latrobe, Tasmania.

Launched 1 May 1999

Commissioned 23 February 2001





## HMAS RANKIN

The submarine is named after Lieutenant-Commander Robert William 'Oscar' Rankin who distinguished himself in action in World War II.

He commanded the sloop HMAS *Yarra* and was conducting convoy escort duties in the Northern Indian Ocean when attacked by a Japanese force in February 1942. Facing a far superior force of three heavy cruisers and two destroyers, Rankin gallantly positioned his ship between the Japanese and the scattering convoy vessels. After an intense exchange, he was killed when an eight-inch salvo hit the bridge shortly after passing the order to abandon ship.

The motto 'Defend The Weak' is testimony to Robert Rankin and HMAS *Yarra's* determination to defend the unarmed convoy ships.

Launched 7 November 2001

Commissioned 29 March 2003