

Roles of vessels in the Royal Navy and Royal Fleet Auxiliary

SSN nuclear-powered hunter killer submarines

Their role is to locate and destroy enemy submarines and surface ships. Nuclear power provides the ability to remain submerged for long periods, contributing to the necessary stealth required in this role, and also providing sufficient speed to deploy world-wide and to close on the target. They are fitted with extensive sonar and underwater launch weapons systems, surface weapons and electronic systems and a combat management system of similar complexity to that of a frigate. These characteristics, together with unlimited endurance for practical purposes, mean that SSNs, together with amphibious ships and aircraft carriers, fall within the strategic naval capability.

SSK conventional-powered submarines

Their role is similar to that of the SSN, but limited in scope because of inability to remain submerged for long periods, and reduced transit speed and endurance. The weapon fit may approach that of SSNs.

SSBN nuclear-powered ballistic submarines

Their role is to carry the strategic nuclear deterrent: Polaris is being phased out, and Trident phased in. Their main objectives are to remain undetected, to remain in constant communication and to maintain the readiness of the strategic weapon system. They carry comprehensive sensors, a combat management system, and torpedoes for self-defence.

Aircraft carriers

Their role is to project air power into forward operations areas by providing the facilities needed for maintaining, arming, fuelling, launching and recovering aircraft, and providing a command and control system for their operation. Aircraft carriers also provide a mobile operations centre for the task force to which they are attached and have an extensive communications equipment and a combat management system capable of co-ordinating all the fleet units and supporting aircraft operations. They can also carry Royal Marines and their equipment, within the lifting capacity of on-board helicopters. They carry some weaponry for their own defence, but rely upon other fleet units to provide a greater degree of protection.

Frigates and destroyers

Type 22 and Type 23 frigates are optimized for anti-submarine warfare, although they also carry anti-ship and anti-aircraft weapons, and a gun for support of forces ashore. Their main role is to protect the fleet and other ships from attack by submarines. They carry extensive sonar and for that reason are designed to be relatively quiet and are optimized for operation at effective sonar speeds. Some of the anti-submarine systems are carried by helicopters (which in turn are supported by auxiliary ships).

Type 42 destroyers are optimized for anti-aircraft warfare. Their primary role is to provide defence against hostile aircraft and missiles for the fleet as a whole and support for land-based operations within range, and accordingly carry long-range anti-aircraft weapons, long-range surveillance systems, and comprehensive communications. They also carry short-range protection systems against aircraft and missiles, and a gun for support of forces ashore. The Royal Navy no longer distinguishes between frigates and destroyers, and in future ships of this type are likely to be called frigates.

Mine countermeasures vessels

There are two basic modes of operation for mine countermeasures vessels in the Royal Navy: minesweeping and minehunting. Minesweepers, such as those of the River class, operate by towing devices to cut moored mines or detonate acoustic or magnetic mines in mined areas which have been located by sonar systems. Minehunters, such as those of the Sandown class, carry more sophisticated sonar systems than minesweepers in order to be able to pinpoint the location of mines. To reduce vulnerability to magnetic mines they are constructed of GRP and stainless steel. They carry extremely accurate navigation and movement control systems so as to be able to arrive safely close to the target. Mines once located are destroyed by using remote-controlled mini-submarines to attach charges which are then detonated to destroy the mine. Sandown class minehunters have a variable depth sonar, towed close to the sea-bed, to undertake minehunting to the edge of the Continental Shelf. Hunt class mine countermeasures vessels operate both as minesweepers and minehunters, and are equipped with a sophisticated hull-mounted sonar to hunt mines in relatively shallow water.

LPDs

The role of LPDs is to carry amphibious troops and their vehicles and equipment, to support a forced landing. They provide a docking facility for the launch and recovery of landing craft. They carry a comprehensive communications system and a command and control system to provide an operations centre for the landing force as well as for the ship itself. They have a self-defence capability against aircraft and missiles.

LPH

The LPH under construction is designed to function as a high-capacity transport ship carrying helicopter-borne troops, stores and equipment to support a forced landing.

LSLs

The role of LSLs is to keep amphibious troops supplied with ammunition and equipment. They can beach if necessary. They rely on other ships for their defence.

Oilers and tankers

The Royal Fleet Auxilliary has a range of tankers and supply ships to support the fleet. They are listed as large fleet tankers, small fleet tankers, AOs and AORs. AORs support the fleet with stores, fuel and ammunition, usually transferred while at sea. They also support helicopters carried by frigates. The latest two AORs, *Fort Victoria* and *Fort George*, are designed to operate away from the main body of the fleet with anti-submarine frigates, and for this reason carry weaponry for their own defence, with appropriate combat management systems. This makes them unusually complicated for auxiliary ships. Earlier AORs, AOs and fleet tankers rely mainly on the fleet for defence.

Survey ships

Their role is to carry out detailed oceanographic survey to support submarine and other naval operations. Survey ships carry very sophisticated sonar, which requires a specific hull shape, but otherwise these ships are built to commercial standards.

Patrol vessels

These are small, lightly-armed vessels, chiefly used for fishery protection. They vary in size from 50 tonnes to 1,500 tonnes.