

Above: HMS Fearless at sea shows her great bulk to advantage in these views from a helicopter. Note the absence of scuttles in the side—not fitted in an air-conditioned ship. The liner-like superstructure, flight-deck aft, tall 'solid' mainmast, and staggered funnels are all easy recognition features. (Official Ministry of Defence photos.)

# COMBINED OPS — 1966 STYLE

## C. O. Ellis visits the new RN assault ship HMS Fearless

VETERANS of Gallipoli, Anzio, and Normandy would almost certainly look twice at a ship which closed the invasion beaches in majestic Cunard style, spawned 'baby' landing craft from her gaping stern, and simultaneously sent a quartet of helicopters—and possibly a hovercraft as well—skimming shorewards at high speed, all loaded with troops and military equipment. But such a ship now exists and she does all these things and much more. Her name is HMS Fearless and we were able to spend a fascinating day aboard her early in March when she gave the first demonstration of her capabilities since commissioning for service in the Royal Navy.

To see how HMS Fearless (and her almost-completed sister ship, HMS Intrepid) came about, we must go back to the time of World War Two when a whole family of landing craft and landing ships, diverse in their functions, were produced in large numbers to make sea-borne landings possible by Allied forces on enemy held coasts. Most of these vessels were of utility design, mass-produced, and considered expendable, if necessary, once in action. They were also, for the most part, small, slow, and limited to making short sea runs to their objectives from some rendezvous area.

After the war a handful of landing craft and ships were retained for peace-time use, forming the Royal Navy's Amphibious Warfare Squadron in the Mediterranean and Middle East. Changing world conditions, however, with Britain taking a 'fire-

brigade' role in distant parts of the globe meant that what was required was a fast type of ship able to carry large troop formations and their equipment, with the ability to land them and support them once ashore.

First to emanate from this thinking were the helicopter carriers *Albion* and *Bulwark* which each carry a complete Royal Marine Commando (equivalent to a battalion) and support arms and use their helicopter squadrons to airlift them very quickly ashore to any trouble point. Carriers were not built to carry tanks and other heavy items, however, which is where the *Fearless* type of assault

ship comes in. The first thing which one notices about *Fearless* is her enormous size. From the distance she looks and moves like a passenger liner, and the illusion is enhanced by the prominent davits carrying LCVPs (Landing craft, vehicles and personnel) on each side of the superstructure.

We flew out from Lee naval air station to *Fearless* in the Solent where her trials were taking place and once airborne in the Wessex helicopter she looked more like a whale factory ship with an opening stern-gate and a long unobstructed deck aft. This was the helicopter flight deck, big enough to take four Wessex aircraft at a time and controlled from a carrier-type 'flyco' situated in the port after super-structure overlooking the deck itself. On the opposite side is a six-ton crane conveniently sited for unloading aircraft and stores from the tank deck.

But the most unique feature of *Fearless* is the dock situated beneath the flight deck. This is where her landing craft load up with tanks and troops, and they do it by actually steaming in through the stern straight on to the tank deck! It comes as a surprise to leave the Wessex, dash forward into the superstructure, down a ramp and find oneself in a vast 'subterranean' harbour like something out of science fiction. The cavernous interior of the tank deck stretches almost the full length of the ship, and when ballasted down for landing craft operation the aftermost section of the ship beneath the flight deck is entirely open to the sea. Two landing craft



Above: Though landing craft are the main means of ferrying equipment ashore, choppers can also handle light loads. Here a 72 Sqn Wessex lifts a Marines Land Rover WOMBAT carrier. Gun is carried as a second load.

can dock abreast with their ramps down for loading and there is room for another pair behind them. When the ship is under way with the stern-gate closed, all four of the LCMs in the attached squadron are carried in the dock.

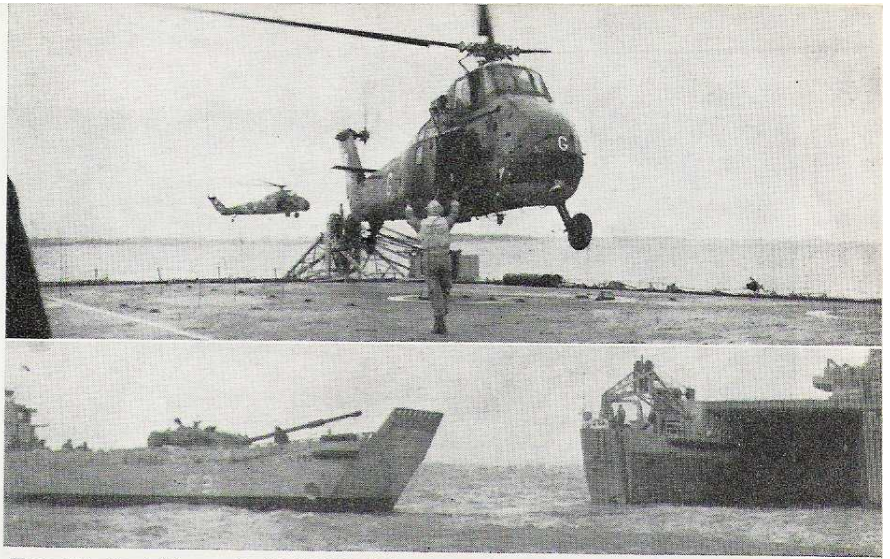
These landing craft are of a new improved design known as the LCM 9, and they each have a standard displacement of 85 tons and a carrying capacity of two Chieftain tanks or equivalent load. A compact superstructure aft gives maximum deck space and a low silhouette. In addition to the tanks parked in the tank deck, it is normal practice to carry eight vehicles already embarked in the LCMs when on patrol. They are thus ready for instant landing in addition to saving valuable deck space.

Of course, the idea of a ship with docking facilities is by no means new. The US-built dock landing ships of World War Two were working on just this principle back in 1943, but it must be said that *Fearless* represents an enormous advance over these earlier designs. They were no more than motorised docks to carry landing craft or boats, whereas *Fearless* with her armour and infantry is very much more a 'fighting' ship. Speed, as mentioned before, is one big and important advance; *Fearless* has two marine turbines (in separate engine rooms) each the same as the power plant of a type 12 frigate and giving a total of 22,000 shaft horse-power. This gives a speed of 20 knots which can be maintained continuously for 5,000 miles, a big increase over the performance of any previous vessel.

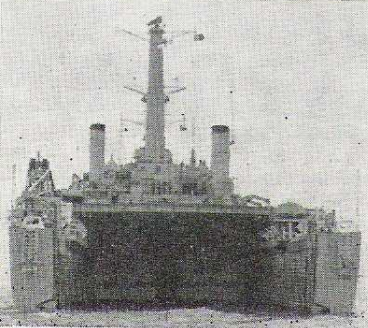
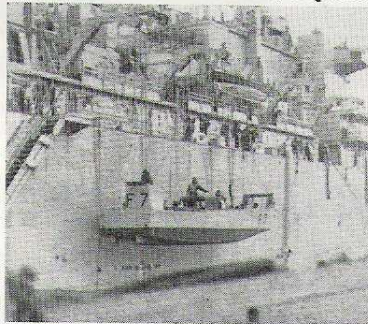
Remote controls are fitted for the engine room so that the ship may be steamed through atomic fall-out without exposing engine room personnel. All generators, pumps, and other auxiliary machines are duplicated throughout in case of damage.

The ballasting system for flooding the dock is particularly ingenious. A ballast control room in one wing of the dock has a push-button console in charge of the dockmaster and his staff, and this equipment controls four reversible pumps which can either take in or discharge water from openings beneath the ship. The water ballast is distributed in a 20 inch diameter plastic ring-main to the ballast tanks in the bottom of the ship. One point that must be taken into account is keeping the ship on an even keel fore and aft as water comes in at the stern.

April, 1966



**Top:** Westland Wessex 2, 'Golf' (XR525) returns from shore while 'Kilo' (XR5678) waits to land on. **Above:** An LCM 9 (with a Chieftain tank aboard) approaches the dock. **Below, top to bottom:** Lowering an LCVP with Land Rover load; bow and stern views of ship showing LCMs just visible in dock.



We were particularly impressed on our visit by the degree of co-operation that had been achieved by members of no less than four different services working in one ship. The amphibious beach unit attached to *Fearless* had Navy, Marine, REME, and RE personnel all working together on various aspects of beach control, mine clearance and recovery. The air element at the time of our visit was provided most efficiently by a flight from 72 Sqdn, RAF Transport Command, whose Wessex 2s were kept busy all day demonstrating embarkation of the Royal Marine Commandos and their equipment.

The flight deck party was, of course, provided by the FAA. Meanwhile Marines and naval ratings manned the LCMs and LCVPs, while the Royal Armoured Corps provided Chieftain and Centurion tanks, Ferrets, a Centurion ARV, Bulldozer, Michigan dumper, and Saro carpet-layer, these latter vehicles being used by the beach unit. The Ferrets, Land Rovers and some Royal Marines 3-ton trucks were kept in a lower tank deck.

Other important features of *Fearless* are the assault operations room and operations room which provide control facilities for the military force commander and naval amphibious force commander respectively. She is fitted with extensive communications systems and can accommodate all necessary control and communications staff. Overall length of *Fearless* is 525 feet; displacement is 12,000 tons. She can carry about 700 soldiers.