= HMS Vanguard (23) =

HMS Vanguard was a British fast battleship built during World War II and commissioned after the war . She was the only ship of her class and was the biggest , fastest and last of the Royal Navy 's battleships and the final battleship to be launched in the world . Work on the ship 's design commenced before the war because the Royal Navy anticipated being outnumbered by the combined German and Japanese battleships in the early 1940s . The British had enough 15 @-@ inch (380 mm) guns and turrets in storage to allow one ship of a modified Lion @-@ class battleship design to be completed faster than the ships of that class that had already been laid down . Work on Vanguard was started and stopped several times during the war and even after construction had begun , her design was revised several times to reflect war experience . These stoppages and changes prevented her from being completed during the war .

Vanguard 's first task after completing her sea trial at the end of 1946 was , early the next year , to convey King George VI and his family on the first Royal Tour of South Africa by a reigning monarch . While refitting after her return , she was selected for another Royal Tour of Australia and New Zealand in 1948 . This was cancelled due to King George 's declining health and Vanguard briefly became flagship of the Mediterranean Fleet in early 1949 . After her return home in mid @-@ 1949 , she became flagship of the Home Fleet Training Squadron . Throughout her career , the battleship usually served as the flagship of any unit to which she was assigned . During the early 1950s , Vanguard was involved in a number of training exercises with NATO forces . In 1953 she participated in Queen Elizabeth II 's Coronation Review . While she was refitting in 1955 , the Admiralty announced that the ship was going to be put into reserve upon completion of the work . Vanguard was sold for scrap and was broken up beginning in 1960 .

= = Design and description = =

By early 1939 it was clear that the first two Lion @-@ class battleships could not be delivered before 1943 at the earliest and that further battleship construction would be necessary to match the German and Japanese battleships already under construction . The main constraint on the construction of any new battleships was the limited available capacity and the time required to build large @-@ calibre guns and their gun turrets . Using four existing twin 15 @-@ inch mountings offered the possibility of bypassing this bottleneck and allowed the construction of a single fast battleship more quickly than building more Lion @-@ class ships . The turrets were originally built for the battlecruisers Courageous and Glorious during World War I and were removed during the conversions of these ships to aircraft carriers in the 1920s . To save time , the Lion design was modified to accommodate the four turrets , and preliminary design work began in July 1939 . The square or transom stern was retained as it was estimated to improve speed at full power by .33 knots (0 @.@ 61 km / h ; 0 @.@ 38 mph) . This made Vanguard the only British battleship built with a transom stern as the Lions were never finished .

Design work was suspended on 11 September after the start of World War II , but resumed in February 1940 after the First Lord of the Admiralty , Winston Churchill , expressed an interest in the ship . The design was modified to increase protection against shell splinters on the unprotected sides of the ship 's hull , the armour of the secondary armament was increased to resist 500 @-@ pound (230 kg) semi @-@ armour @-@ piercing bombs , and the splinter belt 's thickness fore and aft of the main armour belt was reduced by 0 @.@ 5 inches (12 @.@ 7 mm) in compensation . A small conning tower was added aft , and four Unrotated Projectile mounts were added to supplement the six octuple @-@ barrel 2 @-@ pounder anti @-@ aircraft mounts already planned .

More pressing commitments forced the preliminary design work to be suspended again in June and , when it resumed in October , the design was modified again in light of recent war experience . Greater fuel capacity was added and the armour protection improved , but these changes deepened the design 's draught so that it exceeded the 34 @-@ foot (10 @.@ 4 m) limit of the Suez Canal . The thickness of the main belt was reduced by 1 inch (25 mm) to save weight , but the primary method chosen to reduce the draught was to increase the beam by 2 @.@ 5 feet (0 @.@ 76 m) .

This exceeded the width of the docks at Rosyth and Plymouth , which severely limited the number of docks that could handle the ship , but these changes were approved by the Board of Admiralty on 17 April 1941 . The ship had already been ordered on 14 March under the 1940 Emergency War Programme , although the drawings were not turned over to John Brown & Company until ten days later .

Vanguard 's design was revised again , while the ship was under construction in 1942 , to reflect lessons learned from the loss of the King George V @-@ class battleship Prince of Wales and operations with the other battleships . The space between the inboard and outboard propeller shafts was increased from 33 @.@ 5 to 51 @.@ 5 feet (10 @.@ 2 to 15 @.@ 7 m) to prevent a single torpedo from wrecking both shafts , and watertight access trunks were added to all spaces below the deep waterline to prevent progressive flooding through open watertight doors and hatches as happened to Prince of Wales . This change and the relocation of some of the 5 @.@ 25 @-@ inch (133 mm) ammunition handling rooms from the lower deck to the middle deck seriously delayed the ship 's completion . The design requirement that the guns of ' A ' turret be capable of firing straight ahead at 0 ° of elevation was sacrificed to allow her freeboard forward to be increased , and her bow was reshaped to make it less prone to shipping water and throwing sea spray in head seas . The ship 's fuel supply was increased from 4 @,@ 400 long tons (4 @,@ 500 t) to 4 @,@ 850 long tons (4 @,@ 930 t) to prevent the fuel shortage problems suffered by King George V and Rodney during their pursuit of the German battleship Bismarck . The Unrotated Projectile mounts were deleted from the design , and the light anti @-@ aircraft armament was increased to a total of 76 two @-@ pounders in one quadruple and nine octuple mounts and 24 Oerlikon 20 mm cannon were also added in 12 twin mounts . Space for these was made available by removing the two floatplanes , the catapult , and their associated facilities .

A proposal was made in 1942 to convert Vanguard to an aircraft carrier . The Director of Naval Construction stated that doing so along the lines of the Audacious class would present no major difficulties , but would require six months to redesign the ship . The proposal was formally rejected on 17 July .

= = = General characteristics = = =

Vanguard had an overall length of 814 feet 4 inches (248 @.@ 2 m) , a beam of 107 feet 6 inches (32 @.@ 8 m) , and a draught of 36 feet (11 @.@ 0 m) at deep load . She displaced 44 @,@ 500 long tons (45 @,@ 200 t) at standard load and 51 @,@ 420 long tons (52 @,@ 250 t) at deep load . The ship was significantly larger than her predecessors of the class , almost 50 feet (15 @.@ 2 m) longer , and displaced about 6 @,@ 000 long tons (6 @,@ 100 t) more than the older ships at deep load . Vanguard was overweight by some 2 @,@ 200 long tons (2 @,@ 200 t) , which magnified the difference . The ship had a complete double bottom 5 feet (1 @.@ 5 m) deep , and she was divided into 27 main compartments by watertight bulkheads .

The King George V @-@ class ships had been built with almost no sheer to the main deck forwards to allow ' A ' turret to fire straight forward at zero elevation , resulting in a poor sea boat that took a lot of water over the bow . Vanguard 's bow was redesigned as a result of experience with the King George Vs , and a large amount of sheer and flare was applied to the bow . The ship was well regarded as seaworthy , able to keep an even keel in rough seas . At full load , Vanguard had a metacentric height of 8 @.@ 2 feet (2 @.@ 5 m) .

As a fleet flagship , her complement was 115 officers and 1 @,@ 860 men in 1947 . Air conditioning was provided for many of the ship 's control spaces , and asbestos insulation was provided on exposed areas of the ship 's sides , decks and bulkheads . Steam heating was provided for her armament , instruments , look @-@ out positions and other equipment to make Vanguard suitable for operations in the Arctic . An Action Information Centre was fitted below the main armour deck with facilities to track aircraft and ships around Vanguard .

= = = Propulsion = = =

To save design time , the four @-@ shaft unit machinery from the Lion @-@ class battleship was duplicated with alternating boiler and engine rooms . Vanguard had four sets of single @-@ reduction geared Parsons steam turbines housed in separate engine rooms . Each set consisted of one high @-@ pressure and one low @-@ pressure turbine , driving a propeller that was 14 feet 9 inches (4 @.@ 5 m) in diameter . The turbines were powered by eight Admiralty 3 @-@ drum boilers in four boiler rooms at a working pressure of 350 psi (2 @,@ 413 kPa ; 25 kgf / cm2) and temperature of 700 ° F (371 ° C) . The engines were designed to produce a total of 130 @,@ 000 shaft horsepower (97 @,@ 000 kW) and a speed of 30 knots (56 km / h ; 35 mph) , but achieved more than 136 @,@ 000 shp (101 @,@ 000 kW) during the ship 's sea trials in July 1946 , when she reached a speed of 31 @.@ 57 knots (58 @.@ 47 km / h ; 36 @.@ 33 mph) . After trials , the three @-@ bladed propellers on the inboard shafts were replaced by five @-@ bladed propellers in an unsuccessful attempt to reduce vibrations of the inboard propeller shafts .

Vanguard was designed to carry 4 @,@ 850 long tons of fuel oil and 427 long tons (434 t) of diesel fuel . With a clean bottom , she could steam at a speed of 15 knots (28 km / h ; 17 mph) for 8 @,@ 250 nautical miles (15 @,@ 280 km ; 9 @,@ 490 mi) . The ship had four 480 @-@ kilowatt (640 hp) turbogenerators and four 450 @-@ kilowatt (600 hp) diesel generators that supplied the common ring main at 220 volts . Their total output of 3 @,@ 720 kilowatts (4 @,@ 990 hp) was the largest of any British battleship .

= = = Armament = = =

The ship 's main armament consisted of eight 42 @-@ calibre BL 15 @-@ inch Mk I guns in four twin hydraulically powered gun turrets designated ' A ' , ' B ' , ' X ' and ' Y ' from bow to stern . When the turrets were modernised their maximum elevation was increased to + 30 ° , although the guns were loaded at + 5 ° . They fired 1 @,@ 938 @-@ pound (879 kg) projectiles at a muzzle velocity of 2 @,@ 458 ft / s (749 m / s) ; this provided a maximum range of 33 @,@ 550 yards (30 @,@ 680 m) . These guns were also capable of firing the same projectiles while using supercharges which gave a maximum range of 37 @,@ 870 yards (34 @,@ 630 m) . Their rate of fire was two rounds per minute . Vanguard carried 100 shells per gun .

The 15 @-@ inch turrets had been designed when the customary practice was to place the magazine above the shell room , and it was not cost @-@ effective to modify the ammunition hoists to accommodate the opposite arrangement adopted after the Battle of Jutland demonstrated the dangers of exposing the magazines to long @-@ range gunfire . The ship was provided with a powder @-@ handling room above the shell room to mimic the arrangement that turret 's hoists were designed to handle , and another set of hoists moved the propellant charges from the magazines to the powder @-@ handling room . The charges were stowed in cases to reduce their exposure to fire .

The secondary armament consisted of sixteen 50 @-@ calibre QF 5 @.@ 25 @-@ inch Mk I * dual purpose guns in eight twin gun mounts . They had a maximum depression of ? 5 ° and a maximum elevation of 70 ° . They fired an 80 @-@ pound (36 kg) high @-@ explosive shell at a muzzle velocity of 2 @,@ 672 ft / s (814 m / s) . The improved 5 @.@ 25 turrets on Vanguard were claimed to be fully automatic , with a power @-@ rammed breech and automatic tracking and elevation under radar control enabling a rate of fire was about 18 rounds per minute . At maximum elevation , the guns had a maximum range of 24 @,@ 070 yards (22 @,@ 010 m) . 391 rounds were provided for each gun .

Short @-@ range air defence was provided by 73 Bofors 40 mm AA guns in a variety of mountings . Vanguard had ten sextuple @-@ barrel power @-@ operated mounts concentrated in the superstructure and stern , a twin @-@ barrel mount on ' B ' turret , and 11 power @-@ operated single mounts on the upper deck and rear superstructure . All mounts could depress to ? 10 ° and elevate to a maximum of + 90 ° . The 40 @-@ millimetre (1 @.@ 6 in) gun fired a 1 @.@ 97 @-@ pound (0 @.@ 89 kg) shell at a muzzle velocity of 2 @,@ 890 ft / s (880 m / s) to a distance of 10 @,@ 750 yards (9 @,@ 830 m) . The gun 's rate of fire was approximately 120 rounds per minute . Space was not available to stow the standard allowance of 1564 rounds per gun , and Vanguard

only carried 1269 rounds per gun . Two of the single guns on the quarterdeck were removed in 1949 and five others during a major refit in 1954 . All of her multiple Bofors mounts were removed at this same time .

= = = Fire control = = =

Vanguard was unique among British battleships in having remote power control (RPC) for her main , secondary and tertiary guns along with the Admiralty Fire Control Table Mk X for surface fire control of the main armament . There were two director control towers (DCT) for the 15 @-@ inch guns , each carrying a " double cheese " Type 274 fire @-@ control radar for range finding and spotting the fall of shot . Each DCT could control all four turrets while ' B ' turret could control ' A ' and ' X ' turrets . ' X ' turret could only control ' Y ' turret . There were four American Mark 37 DCTs for the 5 @.@ 25 @-@ inch guns , each carrying the twin domes of Type 275 gunnery radar . Lastly , each Mark VI sextuple 40 mm Bofors mounting was provided with a separate CRBF (" close range blind fire ") director fitted with a Type 262 radar , although the ship never mounted her complete outfit of those directors . The STAAG Mk II 40 mm Bofors mounting carried its own Type 262 on the mounting itself . Other radar sets carried were Type 960 air and surface search , Type 293 target indication and Type 277 height finding .

When the 15 @-@ inch gun turrets were modernised , their existing 15 @-@ foot (4 @.@ 6 m) rangefinders were replaced by 30 @-@ foot (9 @.@ 1 m) ones in all turrets except for ' A ' and they were fitted for RPC in azimuth only . The turrets were also provided with de @-@ humidifying equipment and insulation to improve their habitability .

= = = Protection = = =

The ship 's armour scheme was based on that of the King George V class with a thinner waterline belt and additional splinter protection . Originally the belt armour was equal to that of the older ships , but it had to be reduced to offset weight increases when the design was modified to reflect wartime experience . The waterline 460 @-@ foot (140 @.@ 2 m) main belt was composed of Krupp cemented armour (KCA) 13 inches (330 mm) thick , but increased to 14 inches (356 mm) abreast the magazines . It was 24 feet (7 @.@ 3 m) high and tapered to a thickness of 4 @.@ 5 inches (114 mm) at the bottom edge of the belt . Fore and aft of the 12 @-@ inch (305 mm) transverse bulkheads that closed off the central citadel , the belt continued almost to the ends of the ship . Forward it tapered to a thickness of 2 inches (51 mm) and a height of 8 feet (2 @.@ 4 m) and aft to the same thickness , but a height of 11 feet (3 @.@ 4 m) . At the aft end of the steering gear compartment was a 4 @-@ inch (100 mm) transverse bulkhead . After the Battle of the Denmark Strait in 1941 , 1 @.@ 5 @-@ inch (38 mm) non @-@ cemented armour bulkheads were added on the sides of the magazines , to protect them from splinters from any hits from plunging shells , that might have penetrated the ship 's side beneath her belt .

When the gun turrets from the World War I @-@ era battlecruisers were modernised , their KCA faceplates were replaced by new ones 13 inches thick , and their roofs were replaced by 6 @-@ inch (152 mm) non @-@ cemented armour plates . Their sides remained 7 ? 9 inches (180 ? 230 mm) in thickness . The barbettes for the 15 @-@ inch guns were 13 inches thick on the sides , but tapered to 11 ? 12 inches (279 ? 305 mm) closer to the centreline of the ship . The side and roof armour of the 5 @.@ 25 @-@ inch turrets was 2 @.@ 5 inches (64 mm) thick . Their ammunition hoists were protected by armour 2 ? 6 inches (51 ? 152 mm) thick .

Intended to resist the impact of a 1 @,@ 000 @-@ pound (450 kg) armour @-@ piercing bomb dropped from a height of 14 @,@ 000 feet (4 @,@ 300 m) , Vanguard 's deck protection was identical to that of the King George V class . It consisted of six @-@ inch non @-@ cemented armour over the magazines that reduced to 5 inches (127 mm) over the machinery spaces . The armour continued forward and aft of the citadel at the lower @-@ deck level . Forward it tapered in steps from five inches down to 2 @.@ 5 inches near the bow . Aft , it protected the steering gear and propeller shafts with 4 @.@ 5 inches of armour before tapering to a thickness of 2 @.@ 5

inches near the stern . Unlike the Germans , French and Americans , the British no longer believed that heavy armour for the conning tower served any real purpose given that the chance of hitting it was very small ; Vanguard 's conning tower was therefore protected with 3 inches (76 mm) of armour on the face and 2 @.@ 5 inches on the sides and rear . The secondary conning tower aft had 2 inches (51 mm) of armour on its sides .

Vanguard 's underwater protection was enhanced when she was redesigned in 1942 to reflect the lessons learned when Prince of Wales was sunk by Japanese torpedo bombers . It still consisted of a three @-@ layer system of voids and liquid @-@ filled compartments meant to absorb the energy of an underwater explosion . It was bounded on the inside by the 1 @.@ 75 ? 1 @.@ 5 @-@ inch (44 ? 38 mm) torpedo bulkhead . Her enlarged oil tanks reduced the empty spaces that could flood and cause the ship to list and greater provision was made to pump these spaces out . The longitudinal bulkheads of the side protection system were raised one deck higher to further subdivide the spaces behind the waterline armour belt . The side protection system had a maximum depth of 15 feet (4 @.@ 6 m) , but this decreased significantly as the ship narrowed at its ends . Over the length of the citadel , this system was found to be proof against 1 @,@ 000 pounds (450 kg) of TNT during full @-@ scale trials .

= = Construction and career = =

Vanguard was laid down on 2 October 1941 by John Brown and Company of Clydebank , Scotland , with the yard number of 567 . After the Japanese invasion of Malaya in December , the ship was given an A1 priority in the hope of finishing her by the end of 1944 and construction of the light cruiser HMS Bellerophon , as well as some merchant shipping , was halted to expedite the ship 's completion . This was unsuccessful , however , due to a shortage of skilled labour . As a result , it was not until 30 November 1944 that the ship was launched . Princess Elizabeth presided over this ceremony , the first ship she ever launched , and was presented with a diamond rose brooch to commemorate the event .

Captain William Gladstone Agnew assumed command on 15 October 1945 . The end of hostilities following Japan 's surrender reduced the need for new warships , and consequently the ship was not commissioned until 12 May 1946 . By this time , a total of £ 11 @,@ 530 @,@ 503 , including £ 3 @,@ 186 @,@ 868 for the modernisation of the main armament , had been spent on producing Vanguard .

After commissioning , the ship spent several months conducting sea trials and training until August , when she began the necessary modifications to serve as a royal yacht for the forthcoming royal tour of South Africa . The Admiral 's suite was reworked into accommodations for the Royal Family and their staff while the anti @-@ aircraft mount on top of ' B ' turret was replaced by a saluting platform . Agnew was promoted to rear @-@ admiral with effect from 8 January 1947 . The alterations were complete by December , and Vanguard made a shakedown cruise into the Central Atlantic and made a port visit to Gibraltar on the return voyage . Initially escorted by the destroyers Orwell , Obedient , Offa , Opportune , and Rotherham , the ship rendezvoused with the Home Fleet on 1 February 1947 to receive a 21 @-@ gun salute led by the battleships Nelson and Duke of York , and the aircraft carrier Implacable . Later that morning , a Sikorsky R @-@ 4 helicopter landed aboard to pick up mail and photographic film .

Vanguard arrived in Cape Town on 17 February , escorted by the South African frigates Good Hope , Transvaal and Natal on the last leg of her voyage . While the Royal Family toured the country on the first visit by a reigning monarch to South Africa , the ship exercised with ships of the South African and Royal Navies stationed there and made port visits to a number of South African cities . She sailed for home on 22 April and made brief visits to Saint Helena and Ascension Island en route . Vanguard arrived in Portsmouth on 11 May , and Captain F. R. Parham relieved the newly promoted Agnew on 29 May . In July , the ship began an overhaul in Devonport , which lasted until August 1948 . While she was refitting , Vanguard was tasked to carry the Royal Family on a tour of Australia and New Zealand , planned for January 1949 . On 31 August , she began a shakedown cruise to the Mediterranean and returned to Devonport on 12 November . Around this time ,

Vanguard was considered , along with a number of other large warships , for conversion to carry anti @-@ aircraft missiles , but nothing further was done along these lines .

George VI was now too ill for travel , and the Royal Tour was indefinitely postponed later that month . Vanguard became the flagship of Admiral Sir Arthur Power , Commander @-@ in @-@ Chief of the Mediterranean Fleet , on 1 March 1949 , and the ship made port visits to Algeria , France , Italy , Cyprus , Libya , Lebanon , Greece and Egypt before she arrived back at Devonport on 21 July . The newly promoted Rear Admiral Parham was relieved by Captain G. V. Gladstone a week later . The ship then became the flagship of the Home Fleet Training Squadron under Rear Admiral Edward Evans @-@ Lombe on 12 November . While returning from a brief training sortie to Gibraltar , Vanguard went to the aid of a small French merchantman whose cargo had shifted in a severe storm on 13 February 1950 . The merchantman , SS Boffa , was taken under tow and the cargo was redistributed . Once the storm had abated , Boffa was able to resume her voyage under her own power . Vanguard reached Weymouth Bay the following day . Later , in March , she fired the salute to Vincent Auriol , the President of France , during his state visit to Great Britain .

On 13 September 1950 Admiral Sir Philip Vian hoisted his flag as Commander in Chief , Home Fleet , on Vanguard and the ship joined the rest of Home Fleet on exercises with the Royal Canadian Navy and the Mediterranean Fleet . On 19 December , Vian transferred his flag to Indomitable . Nearly two months later , on 10 February 1951 , the aircraft carrier collided with Vanguard as the carrier docked at Gibraltar . The hole in the battleship 's stern was not serious , and Vian re @-@ hoisted his flag in Vanguard shortly afterwards . After manoeuvres with Indomitable , during which her aircraft " sank " the battleship , the ship made port visits in Genoa and Villefranche @-@ sur @-@ Mer before returning for a brief refit in Devonport on 14 March . After completing her refit in May , she became flagship of the Home Fleet Training Squadron under Rear Admiral R. M. Dick at the Isle of Portland . Four months later the admiral transferred his flag to the carrier Indefatigable as Vanguard began another refit in preparation to again become the flagship of Home Fleet .

Buckingham Palace announced in November that King George VI was planning to take a short cruise for his health aboard Vanguard , which meant that her Admiral 's suite again had to be modified to accommodate him and his staff . Captain John Litchfield assumed command on 21 December while the ship was still refitting , but the King died on 6 February 1952 before he could make his cruise . A detachment from the ship participated in his funeral procession before she departed for her post @-@ refit shakedown cruise on 22 February . After exercising with Implacable , Indomitable and the fast minelayer Apollo , Vanguard returned home on 29 March . She became flagship of Home Fleet again on 13 May when Admiral Sir George Creasy hoisted his flag . Due to manning and weight problems , Vanguard operated with many of her turrets unmanned and with ammunition carried for only two of the 15 @-@ inch turrets and only starshell ammunition for the 5 @.@ 25 @-@ inch guns . She participated in exercises with the Dutch and American navies , before returning to Portsmouth for the holidays . Litchfield was relieved by Captain R. A. Ewing on 19 January 1953 ; the ship departed the next day for a brief refit at Gibraltar . After its completion on 2 March , the ship trained with several of the Royal Navy 's carriers before arriving back at Portsmouth on 25 March . Vanguard participated in Queen Elizabeth 's Coronation Fleet Review at Spithead on 15 June 1953 . The following September , she participated in NATO 's Exercise Mariner in the Denmark Strait .

Admiral Sir Michael Denny replaced Creasy as Commander @-@ in @-@ Chief , Home Fleet , on 5 January 1954 and Vanguard participated in Exercise Medflex A with Dutch and French ships in March . During the rest of the year she participated in anti @-@ submarine and anti @-@ aircraft exercises as well as making port visits to Oslo and Kristiansand in Norway and Helsingborg in Sweden . She was inspected on 11 July by King Gustaf VI Adolf of Sweden before returning home later that month . Denny struck his flag on 15 September , and Vanguard sailed to Devonport for a £ 220 @,@ 000 refit 10 days later . The February 1955 Defence Estimates had intended her as the Home Fleet flagship with a role as a Sverdlov @-@ class cruiser killer , but after the appointment of Earl Mountbatten in April 1955 and with Antony Eden replacing Churchill as prime minister , the government decided instead to maintain two extra cruisers in the fleet , and Vanguard was placed in

reserve when it was completed its 1955 refit ; she subsequently became the flagship of the Reserve Fleet when Vice Admiral Richard Onslow hoisted his flag on 28 November . While moored in Fareham Creek , during her time in the reserve fleet , waterline shots of Vanguard in Portsmouth Harbour were filmed for the title sequence of the 1957 comedy film Carry on Admiral . Just before decommissioning , scenes for the 1960 film Sink the Bismarck ! were filmed aboard , with Vanguard being used to depict interiors of the bridges , Admiral 's Quarters and gun turrets for Hood , Bismarck and King George V.

On 9 October 1959 the Admiralty announced that Vanguard would be scrapped , as she was considered obsolete and too expensive to maintain . She was decommissioned on 7 June 1960 and sold to the Iron and Steel Corporation of Great Britain for £ 560 @,@ 000 . On 4 August 1960 , when the ship was scheduled to be towed from Portsmouth to the breaker 's yard at Faslane , Scotland , the whole of the Southsea sea front was packed with people who came to see her off . As Vanguard was being towed towards the harbour entrance , she slewed across the harbour and ran aground near the Still & West pub . She was pulled off by five tugboats an hour later , and made her final exit from Portsmouth . Five days later she arrived at Faslane , and by mid @-@ 1962 the demolition process was complete ; she was the last British battleship to be scrapped .

As a part of the scrapping process , sections of 150 @-@ millimetre @-@ thick (5 @.@ 9 in) steel plate were recovered from Vanguard and used for the shielding of the whole body monitor at the Radiobiological Research Laboratory (now DSTL) at Alverstoke , Gosport in Hampshire , England .