

# TOWN CLASS LIGHT CRUISER

## BRIEFING

written by

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## Key Information

<b>Country of Origin:</b>	Great Britain.
<b>Manufacturers:</b>	Devonport Dockyard (Plymouth), Scotts (Greenock), Vickers-Armstrong (Tyne), John Brown (Clyde)
<b>Major Variants:</b>	Southampton class, Liverpool class, Edinburgh class
<b>Role:</b>	Reconnaissance, commerce protection, convoy escort
<b>Operated by:</b>	Royal Navy
<b>First Laid Down:</b>	October 1934
<b>Last Completed:</b>	July 1939
<b>Units:</b>	<i>HMS Southampton, HMS Newcastle, HMS Sheffield, HMS Glasgow, HMS Birmingham, HMS Manchester, HMS Gloucester, HMS Liverpool, Edinburgh Class, HMS Belfast, HMS Edinburgh</i>

## Overview

Cruisers were formally defined in the 1930 London Treaty as “*Surface vessels of war, other than capital ships or aircraft carriers, the standard displacement of which exceeds 1,850 tons (1,880 metric tons), or with a gun above 5.1 inch (130 mm) calibre*”. These were further sub-divided in to two sub classes: heavy cruisers, which carried guns between 6.1 inches (155 mm) and eight inches (203 mm), and light cruisers with guns of six inches (152 mm) or below. The Southampton class cruiser is a light cruiser.

Southampton class ships are the original variants of the Town class cruisers. Five Southampton class cruisers were built by Great Britain (*HMS Southampton, HMS Newcastle, HMS Sheffield, HMS Glasgow and HMS Birmingham*), entering service just prior to the start of the Second World War. All apart from *HMS Southampton* survived the war, although all of the ships were damaged in action.

Despite being designated as light cruisers, the advantage of firepower between the heavy and light cruisers did not always lie in ships with the bigger guns. In particular, the heavier eight inch gun took longer to reload, and because of this the six inch guns could put a heavier weight of shell out per minute than the eight inch guns. This was offset by the increased range of the eight inch guns. This meant that with good visibility the advantage clearly went to the heavy cruiser, with its ability to severely damage a light cruiser before it could get in range to use its guns. However in conditions of poor visibility, or at night, the increased range was of no benefit, and the light cruiser was at an advantage as its faster-firing weapons could inflict more damage in a shorter period of time.

The Southampton class cruiser was conceived as a light cruiser to fit within the limits set by the 1930 London Naval treaty. Under heavy criticism, twelve six inch (152 mm) guns (in four turrets) were selected as the main weapons. Pressure to increase this to 15 guns (to match the Japanese Mogami class and the American Brooklyn class) was resisted, on the grounds that this would break the 10,000 ton limit set by the treaties, although given the generally liberal interpretation of ship displacement by other powers the refusal appears strange. Under normal operating conditions, the guns could fire eight rounds per minute each, and had a maximum range of approximately 25,500 yards (23,317 metres). Each round weighed 112 pounds (50.8 kg), and (unlike the rounds for eight inch guns) could be manually handled in the event of power failure.

Armour for the ships was chosen to provide some protection against the eight inch shells fired by heavy cruisers (which the Southampton class might be expected to fight), although they could not be expected to withstand the much heavier guns of capital ships.

Aircraft were provided for a reconnaissance role, and having experienced problems in other ships maintaining aircraft in an air-worthy condition the ships were fitted with two aircraft hangars - the first British cruisers to be so equipped. The aircraft were launched by catapult from the ship, and were recovered by crane after landing on the water. The chosen aircraft was the Supermarine Walrus, which was a single engine amphibious biplane.

Eight four inch (102 mm) guns were chosen for dual purpose air defence and short range weaponry, and had a rate of fire of 20 rounds per minute. These were supplemented with two four barrelled pom-poms, which were a cut down version of the eight barrelled weapon fitted to larger ships. These guns fired 115 rounds per minute per barrel, and were effective out to 1,100 metres (1,203 yards). Finally, eight 0.5 inch (13 mm) machineguns were installed in two mounts of four guns each, although these were found to be prone to jamming. The pre-war lack of appreciation of the threat posed by aircraft can be seen in this light selection of anti-aircraft weaponry.

Torpedo tubes were provided in case the vessel had to go in to action against a capital ship, which could be expected to withstand six inch (152 mm) guns.

Overall, the Southampton class was seen to be a success, with proven ability to stay afloat and continue to fight after sustaining considerable damage, effective main guns, adequate armour and sufficient speed - all the qualities of a good cruiser. In common with all ships of their time, the Southampton class was shown to be initially lacking in air defence, although as the war progressed significant improvements were made to the anti-aircraft guns and this deficiency was rectified.

## Units

Ship	Builder	Laid Down	Launch	Completed	Left Service	Fate
<b>Southampton Class</b>						
<i>HMS Birmingham</i>	Devonport Dockyard (Plymouth)	Jul-1935	Sep-1936	Nov-1937	Sep-1960	Scrapped
<i>HMS Glasgow</i>	Scotts (Greenock)	Apr-1935	Jun-1936	Sep-1937	Jul-1958	Scrapped
<i>HMS Newcastle</i>	Vickers-Armstrong (Tyne)	Oct-1934	Jan-1936	Mar-1937	Aug-1959	Scrapped
<i>HMS Sheffield</i>	Vickers-Armstrong (Tyne)	Jan-1935	Jul-1936	Aug-1937	Sep-1967	Scrapped
<i>HMS Southampton</i>	John Brown (Clydebank)	Nov-1934	Mar-1936	Mar-1937	Jan-1941	Heavily damaged by aircraft from II/StG2. Deliberately sunk by torpedoes from <i>HMS Gloucester</i> and <i>HMS Orion</i> (154nm ESE of Malta in the Mediterranean)
<b>Liverpool Class</b>						
<i>HMS Manchester</i>	Hawthorn Leslie (Hebburn)	Mar-1936	Apr-1937	Aug-1938	Aug-1942	Heavily damaged by Italian torpedo boat (either <i>Ms16</i> or <i>Ms22</i> ). Scuttled (4nm E of Kelibia, in the Mediterranean)
<i>HMS Gloucester</i>	Devonport Dockyard (Plymouth)	Sep-1936	Oct-1937	Jan-1939	May-1941	Sunk by aircraft from StG2, I/LG1 and II/LG1 (10nm W of Antikithera Island, in the Mediterranean)
<i>HMS Liverpool</i>	Fairfield (Govan)	Feb-1936	Mar-1937	Nov-1938	Jul-1958	Scrapped
<b>Edinburgh Class</b>						
<i>HMS Belfast</i>	Harland & Wolff (Belfast)	Dec-1936	Mar-1938	Aug-1939	Aug-63	Museum ship, moored in the Thames in London
<i>HMS Edinburgh</i>	Swan Hunter (Wallsend)	Dec-1936	Mar-1938	Jul-1939	May 1942	Torpedoed first by submarine <i>U456</i> then by destroyer <i>Z24</i> . Deliberately sunk by a torpedo from <i>HMS Foresight</i> (120nm ENE of North Cape, Norway).

## Specifications

	<b>Southampton Class</b> <sup>[Note 4]</sup>	<b>Liverpool Class</b> <sup>[Note 4]</sup>	<b>Edinburgh Class</b> <sup>[Note 4]</sup>
Displacement	9,100 tons standard 11,200 tons full load	9,400 tons standard 11,650 tons full load	10,565 tons standard 12,980 full load
Length (OA)	591 feet 6 inches (180.29 m)	591 feet 6 inches (180.29 m)	613 feet 6 inches (186.99 m)
Length (pp)	558 feet (170.08 m)	558 feet (170.08 m)	579 feet (176.48 m)
Length (WL)	584 feet (178.0 m)	Not available	Not available
Beam	62 feet 3 inches (18.97 m)	64 feet 9 inches (19.74 m)	64 feet 9 inches (19.74 m)
Draft (Standard)	17 feet (5.18 m)	17 feet 6 inches (5.33 m)	18 feet (5.49 m)
Draft (Full Load)	20 feet (6.10 m)	20 feet 6 inches (6.25 m)	22 feet 6 inches (6.86 m)
Block Coefficient	0.54 full load	0.52 <sup>[Note 1]</sup>	0.51 <sup>[Note 1]</sup>
Propulsion	75,000 SHP (55.9 MW)	82,500 SHP (61.5 MW)	80,000 SHP (59.7 MW)
Speed	32 knots 30.5 knots full load	32 knots 30.5 knots full load	32 knots 31 knots full load
<b>Weapons</b>			
Main Guns	12 x 6 inch (152 mm) in 4 turrets	12 x 6 inch (152 mm) in 4 turrets	12 x 6 inch (152 mm) in 4 turrets
Other Guns	8 x 4 inch (102 mm) high angle guns in 4 mounts 8 x 2 pound (0.91 kg) pom-poms in two mounts 8 x 0.5 inch (13 mm) machine guns in two mounts	8 x 4 inch (102 mm) high angle guns in 4 mounts 8 x 2 pound (0.91 kg) pom-poms in two mounts 8 x 0.5 inch (13 mm) machine guns in two mounts	12 x 4 inch (102 mm) high angle guns in 6 mounts 8 x 2 pound (0.91 kg) pom-poms in two mounts 8 x 0.5 inch (13 mm) machine guns in two mounts
Torpedo Tubes	6 x 21 inch (533 mm) torpedo tubes in two mounts	6 x 21 inch (533 mm) torpedo tubes in two mounts	6 x 21 inch (533 mm) torpedo tubes in two mounts
<b>Armour</b>			
Side Belt	4.5 inches (114 ,m)	4.5 inches (114 ,m)	4.5 inches (114 ,m)
End Bulkheads	2.5 inches (64 mm)	2.5 inches (64 mm)	2.5 inches (64 mm)
Magazine	1 to 4.5 inches (25 to 114 mm)	1 to 4.5 inches (25 to 114 mm)	3 to 4.5 inches (76 to 114 mm) <sup>[Note 2]</sup>
Barbette	1 to 2 inches (25 to 51 mm)	1 to 2 inches (25 to 51 mm)	1 to 2 inches (25 to 51 mm)
Turret	1 to 2 inches (25 to 51 mm)	1 to 2 inches (25 to 51 mm)	2 to 4 inches (51 to 102 mm)
Machinery	1.25 to 1.5 inches (32 to 38 mm)	1.25 to 1.5 inches (32 to 38 mm)	1.25 to 2 inches (32 to 51 mm)
<b>Miscellaneous</b>			
Aircraft <sup>[Note 3]</sup>	2 Supermarine Walrus	2 Supermarine Walrus	2 Supermarine Walrus
Compliment	750 (peace) 930 (war)	800 (peace) 980 (war)	781 (peace) 950 (war)

Note 1: Good approximation, although the waterline length unknown.

Note 2: The box citadel approach used in the Southampton and Liverpool classes was abandoned in favour of an extension of the side belt.

Note 3: Up to three aircraft could be carried, although one must remain on deck. There is no known case of three aircraft being carried on any of these ships.

Note 4: During the war, changes were continually made to the vessels to meet the needs of the areas where they were operating in at the time, to keep up to date with technological developments and to reflect war experience. By early 1941 no two ships mounted the same equipment, and by the end of 1941 there were no unmodified Southampton class cruisers. Changes included the addition of anti-aircraft equipment (by the end of the war one turret had been replaced with AA guns) and the addition of radar.