FRIGATE

HMS LEANDER

A brand-new HMS Euryalus *frigate of the Leander class on display during Navy Days.*

GENERAL PURPOSE FRIGATE

The British frigate programme of 1951 resulted in four types of specialized frigates:

- Anti submarine (Type 12),
- Anti-aircraft (Type 41),
- Aircraft direction (Type 61) and
- Utility (Type 16).

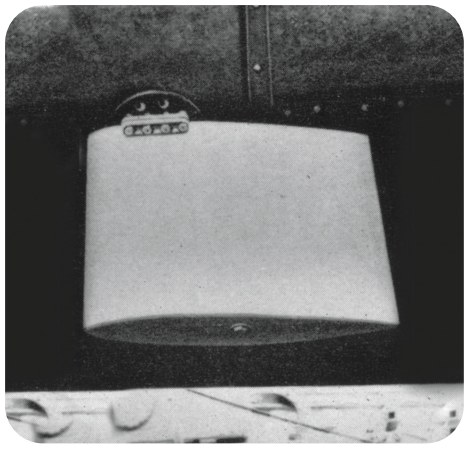
However there was a clear requirement for a class of general purpose frigates. A standardized design would not only be cheaper to construct and operate but the multi-role capability would make operational deployments easier. This requirement was partly fulfilled by the Tribal class, although these vessels had insufficient armament and speed to act in an escort role and were consequently employed mainly in the Far East and at foreign stations. Plans to build further Tribal class frigates were abandoned in favour of modifying the Type 12 design.

Design work on updating the Type 12 design began in 1958. Whilst the hull and machinery of the *Whitby* class and *Rothesay* class Type 12 frigates remained largely unchanged, the superstructure was redesigned as a single block and incorporated a helicopter hangar. Fully air conditioned the modified vessels would have better living and working conditions than their predecessors and would be more resistant to nuclear and chemical warfare. For example, they were built without portholes. With a standard displacement of 2,450 tons they would measure 372 ft in length, 41ft in beam and 18ft in draught. Powered by two Babcock and Wilcox boilers they were designed for a speed of 30 kts and a complement of 251. The armament was tailored to suit their general purpose role. They would carry 4.5 inch Mk6 twin mounting while for close range air defence they were designed to carry a Seacat launcher on the hangar roof. Anti submarine defence would consist of a single Mk10 three barrelled anti submarine mortar (Limbo) mounted aft of the flight deck, and the Westland Wasp helicopter.

These features from the County class destroyers were also incorporated including a bridge that provided better visibility and hydraulic power systems to drive the Seacat lifts and various winches. This feature also reduced the manpower needed on deck to operate the Leander Class. The *Leander* class was noted for its strong performance in poor weather and heavy seas. This was made possible through twin rudders, twin propellers and non-retractable fin stabilisers.

Type 12 Rothesay class

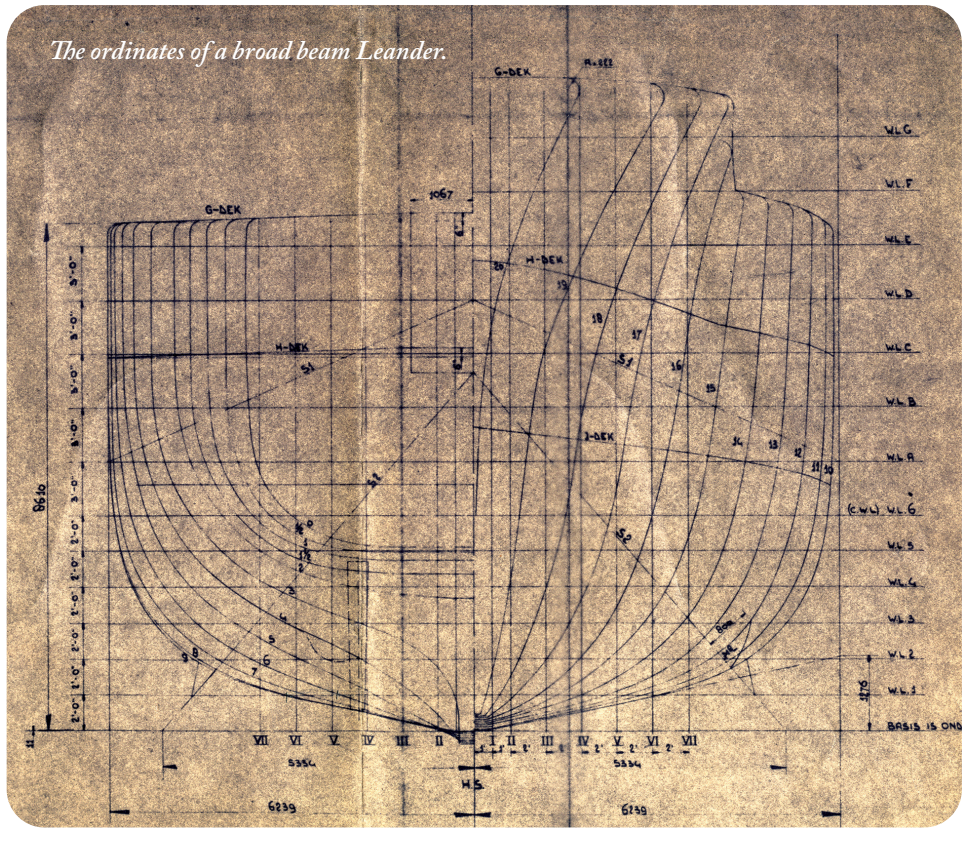
Type 41 Leopard class



Non-retractable fin stabilizer

In 1960 the Admiralty announced that three *Rothesay* class vessels would be completed to a Leander design and subsequently *Weymouth*, *Fowey* and *Hastings*, were converted whilst under construction and completed as *Leander*, *Ajax* and *Dido*, respectively. A fifth unit of the *Salisbury* class, originally laid down as *Coventry*, was completed as fourth *Leander*, *Penelope*.

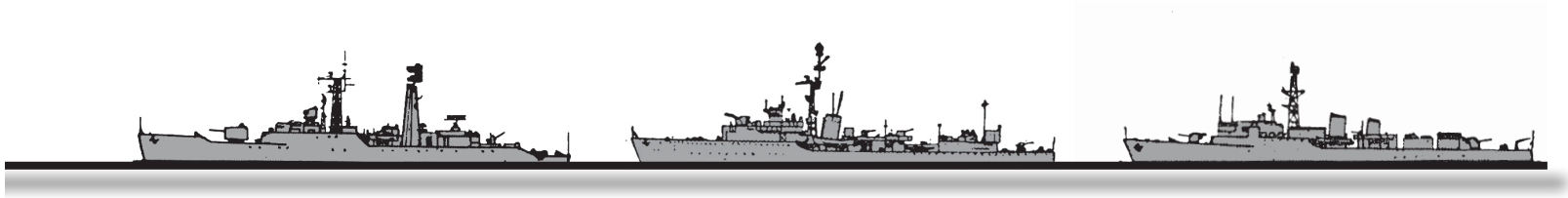
Orders for *Aurora*, *Euryalus* and *Galatea* were placed in 1961 followed by a further three - *Arethusa*, *Naiad* and *Cleopatra* - the following year. Six additional units ordered between autumn 1962 and early 1963 formed a slightly modified second batch of which the main difference was an improved engine room design with new machinery (Y-136 as opposed to Y-100). The design was revised again resulting in a third batch of ten ships, ordered between 1965 and 1968. These vessels had improved propulsion (Y-160) but more importantly were 43ft in beam, which improved stability and increased internal space. They were correspondingly referred to as 'Broad Beam Leanders'.



The ordinates of a broad beam Leander.

Typical silhouette of the new design.

The final *Leander* class Frigate, *Ariadne*, entered service in 1971. The class, now consisting of 26 vessels, was the largest class of major warship built for the Royal Navy since the end of the Second World War. The building programme had lasted thirteen years and provided work for over a dozen shipyards. The construction programme was also the last to incorporate Royal Dockyards: HMS *Andromeda* was the last warship built at Portsmouth Dockyard and HMS *Scylla* the last built at Devonport Dockyard. The *Leander* class bore names of mythological characters from Greek and Roman mythology last used for Second World War era cruisers. This emphasised the increasingly important role of the frigate in the modern Navy. The design was successfully exported overseas. Four vessels were built in UK yards: two for New Zealand and two for Chile, while fourteen were built in foreign yards: two for Australia, six for India and six for the Netherlands.



Type 61 Salisbury class

Type 16

Type 81 Tribal class

	Name	Pennant	Builders	Commissioned	Fate
Batch 1 *Y-100 machinery*	Leander	F 109	Harland & Wolff Ltd, Belfast.	27 March 1963	Sunk as target 1989
	Dido	F 104	Yarrow & Co Ltd, Glasgow.	18 Sept. 1963	To New Zealand as HMNZS Southland 1983, paid out 1995 and sold for scrap
	Penelope	F 127	Vickers-Armstrongs Ltd, Newcastle	31 Oct. 1963	To Ecuador 1991 as Presidente Eloy Alfaro.
	Ajax	F 114	Cammell Laird & Co Ltd, Birkenhead	10 Dec. 1963	Scrapped 1988
	Aurora	F 10	John Brown & Co Ltd, Clydebank	9 April 1964	Scrapped 1990
	Galatea	F 18	Swan, Hunter & Wigham Richardson Ltd, Wallsend-on-Tyne	25 April 1964	Sunk as target 1988
	Euryalus	F 15	Scotts Shipbuilding & Engineering Co Ltd, Greenock	16 Sept. 1964	Sold for scrap 1990
	Naiad	F 39	Yarrow & Co Ltd, Glasgow	15 March 1965	Sunk as target 1990
	Arethusa	F 38	JS White & Co Ltd, Cowes, Isle of Wight	24 Nov. 1965	Sunk as target 1991
	Cleopatra	F 28	HM Dockyard, Devonport	4 January 1966	Sold for scrap 1993
Batch 2 *Y-136 machinery*	Phoebe	F 42	Alexander Stephen & Sons Ltd, Linthouse, Glasgow	15 April 1966	Sold for scrap 1992
	Minerva	F 45	Vickers Ltd, Shipbuilding Group, Newcastle	14 May 1966	Sold for scrap 1993
	Sirius	F 40	HM Dockyard, Portsmouth	15 June 1966	Sunk as target 1998
	Juno	F 52	JI Thornycroft Ltd, Southampton	18 July 1967	Sold for scrap 1994
	Argonaut	F 56	Hawthorn Leslie, Hebburn	17 August 1967	Sold for scrap 1995
	Danae	F 47	HM Dockyard, Devonport	7 Sept. 1967	To Ecuador 1991 as Morán Valverde. She was decommissioned in 2008, and put up for sale in December 2009
Batch 3 *Y-160 machinery*	Charybdis	F 75	Harland & Wolff Ltd, Belfast	2 June 1969	Sunk as target 1993
	Hermione	F 58	Yarrow & Co Ltd, Glasgow	11 July 1969	Sold for scrap 1997
	Jupiter	F 60	Yarrow & Co Ltd, Glasgow	9 August 1969	Sold for scrap 1997
	Bacchante	F 69	Vickers Ltd, Shipbuilding Group, Newcastle	17 Oct. 1969	To New Zealand 1982 as Wellington, sunk as artificial reef in Cook Strait 2005
	Andromeda	F 57	HM Dockyard, Portsmouth	2 Dec. 1968	To India 1995 as training ship, Krishna. Decommissioned 24 May 2012
	Scylla	F 71	HM Dockyard, Devonport	12 Feb. 197	Sunk as artificial reef off Whitsand Bay 2004
	Achilles	F 12	Yarrow & Co Ltd, Glasgow	9 July 1970	To Chile 1990 as Ministro Zenteno, in reserve from 2006. Washed out to sea by a tsunami and scuttled, 2010
	Diomede	F 16	Yarrow & Co Ltd, Glasgow	2 April 1971	To Pakistan 1988 as Shamsher, decommissioned pre-2007, parts used for Zulfiqar
	Apollo	F 70	Yarrow & Co Ltd, Glasgow	28 May 1972	To Pakistan 1988 as Zulfiquar, decommissioned 4 January 2007. Sunk as target 12 March 2010
	Ariadne	F 72	Yarrow & Co Ltd, Glasgow	10 Feb. 1973	To Chile 1992 as General Baquedano, sunk as target 2004

Technical data (Batch 1)

Displacement:	2,450 tons	(2,860 tons full load)	
Measurements:	length over all	109.70 m.,	(372 ft.)
	beam	12.50 m.,	(41 ft.)
	draught	4.2 m.,	(14 ft.)
Complement:	17 Officers, 246 enlisted men		
Machinery:	30.000 hp, 2 double reduction geared turbines; 2 shafts, 28 knots		

The nameship of a new class, Leander was origianaly to have been the Weymouth. A frigate of the Rothesay class.

The scale of the building programme and the period it spanned, meant that by the time the last vessel entered service the design was largely outdated, lacking new guided missiles and long range anti submarine equipment. The first seven vessels hadn't even been completed with Seacat. In order to avoid obsolescence these vessels required the latest equipment and technology.

Twenty-six Leanders were built for the Royal Navy and eighteen for other navies. This total of 44 set the post-1945 record for construction to one design among frigates and larger warships outside the United States and Russia. Elaborate "finish" was arguably wasteful but perhaps good appearance contributed to foreign naval orders for Leanders.

The design of the frigate introduced little new technology: no gas turbines, long-range missiles, computers, or automatic guns. If this cautious choice was a gamble, the Royal Navy won the bet because these technologies proved largely experimental until about 1970.

HMS Leander

Builder: Harland & Wolff, Ltd, Belfast.

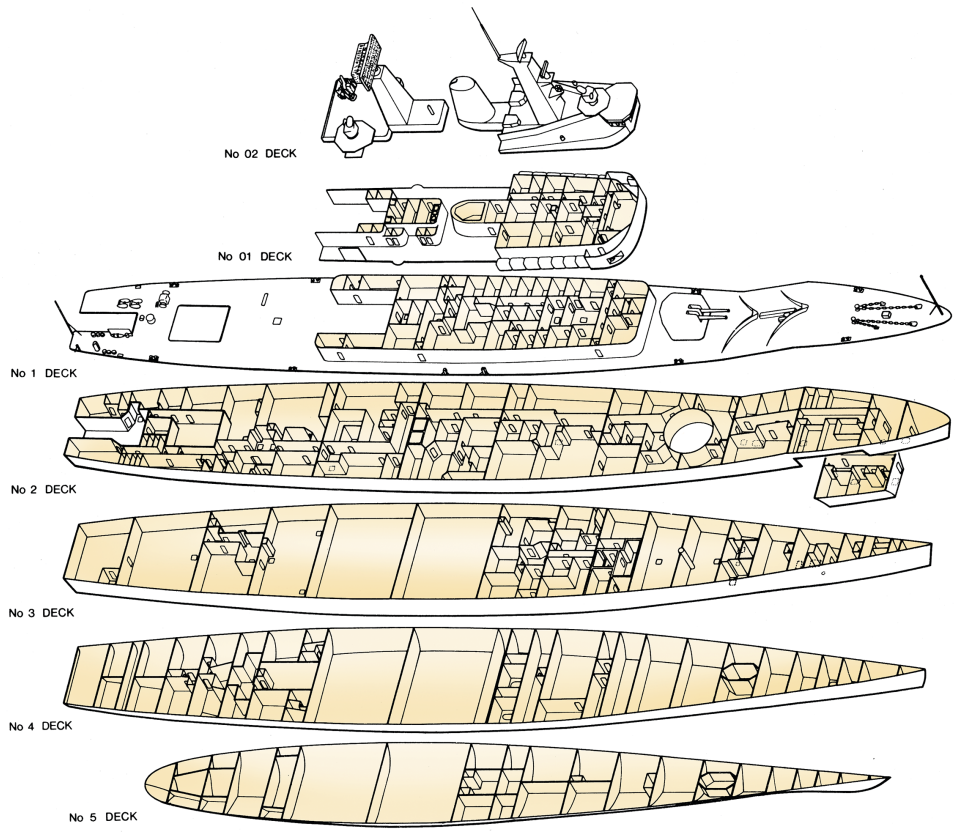
1956: Ordered as HMS *Weymouth* of Rothesay class.

1959:
10 April - Laid down.

1961:
28 June - Launched.

1963:
27 March - Commissioned
- Deployed to the West Indies as WIG (West Indies Guardship), performing a variety of duties while there.

1964:
April - Returned to UK.



In 1965, the Matchmaker squadron visited the port of Rotterdam. On the forecastle the lines are out in preparing of mooring. The signal letters (Golf, Hotel, Quebec and Whiskey) hoisted on starboard yardarm.
(Collection NIMH)

10 May 1965, assisted by a tug the ship is moving slowly to her berth in Rotterdam.

Hero and Leander

A mythical love story. Leander is a young man from Abydos on the Asian side of the Dardanelles who falls in love with Hero ,a priestess of Aphrodite, who dwells in a tower in Sestos on the European side of the Straits. Every night Leander swims across the Hellespont to be with her guided by the lamp that Hero lights at the top of her tower.

Succumbing to Leander's soft words and to his argument that Aphrodite, being the goddess of love, would scorn a virgin's worship Hero allows him to make love to her. This lasted through the warm summer. But one stormy winter night the waves tossed Leander about and the gusts blew out Hero's light. Leander lost his way and drowned. When Hero saw his corpse she threw herself over the edge of the tower to be with him.

The badge was derived from the crest of Captain Thompson who commanded the 4th rate (52 guns) *Leander* at Aboukir (the Battle of the Nile, 1 August 1798).

Left and below: The gangway of the ship in a foreign port.

During trials in 1963. Note the two 40 mm guns on the hangar roof.

Below: Mortar firing in ASW exercise. *(Collection NIMH)*