



**The  
World  
Ship  
Society**



**Southend Branch**

## *News and Views*

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### **NOTES**

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## NEWS

### ODISEA



An unusual arrival in the Thames on 14<sup>th</sup> March 2026 was the brand-new Cayman Isles flagged superyacht ODISEA, which had departed from Bremen the day before. She berthed at George's Stairs Tier, a little downstream of Tower Bridge. She is apparently owned by a "mystery American pet food

billionaire”. Published information about the ship is also rather sparse. She departed on the afternoon of 21<sup>st</sup> March, apparently bound for Malaga.



ON THE PONTOON

She had been built by Lurssen with superficial design input from the British RWD Studio. She was built in Stahibau Nord in Bremerhaven and transported by the 95m long pontoon BHV INNOVATION to Lemwerder in Bremen for fitting out.

Construction started in March 2022, and the move between the shipyards took place in April 2023. Sea trials in the Weser took place in August 2025 and the delivery date was 13<sup>th</sup> March 2026.



She is of 2397 gt with dimensions 78.2m x 13.3m. Her full displacement hull is of steel and her superstructure of aluminium, and her 5 decks are of teak. Her power plant is conventional, with twin diesels driving two screws. She has a

compact exhaust with a Lurssen patented SCR system to significantly reduce Nox emissions.



Her accommodation is impressive, a “glass wrapped skylounge”, a large jacuzzi aft, dining for up to 20, 2 outdoor cinemas, a water sports area forward, a wellness retreat, etc.



MOORED IN THE THAMES

## THUN VETTERN



Calling on 18<sup>th</sup> March at the BP Berth on the Isle of Grain from Castellon in Spain was the Swedish flagged product tanker THUN VETTERN with a cargo of aviation fuel. She was built by the China Merchants Jinling Shipyard at Yangzhou, being delivered in June 2024. She is of 17,945 dwt with dimensions 149.9m x 23.0m x 9.4m. She is classified as Ice class 1A. She departed on 20<sup>th</sup> March for an undisclosed destination.



She is one of twenty sisters referred to as the Vinga series of tankers designed for high energy efficiency and sustainability in the Baltic/ North Sea region. The design was developed by FKAB and Furetank.



She is powered by a single 9-cylinder 4-stroke dual fuel medium speed Wartsila 9L34DF engine of 4500 kW giving 12 knots. The engine can run on LNG/ LBG (Liquified BioGas) or gas oil and complies with imo Tier 111 emission requirements. She has battery backup for vital functions and a specialised hull design for improved efficiency. She is fully equipped for shore power.

She is owned by Thun Tankers and managed by Furetank Chartering in the Gothia Tanker Alliance.

## **OPTIMANA**



A recent caller in Tilbury Docks was the Isle of Mann flagged self-unloading open hatch dry bulk/container vessel OPTIMANA. She berthed on 7<sup>th</sup> March on Berth 42, presumably bringing in a cargo of forest products. She had travelled from Antwerp and she departed from Tilbury on 15<sup>th</sup> March for Montevideo.

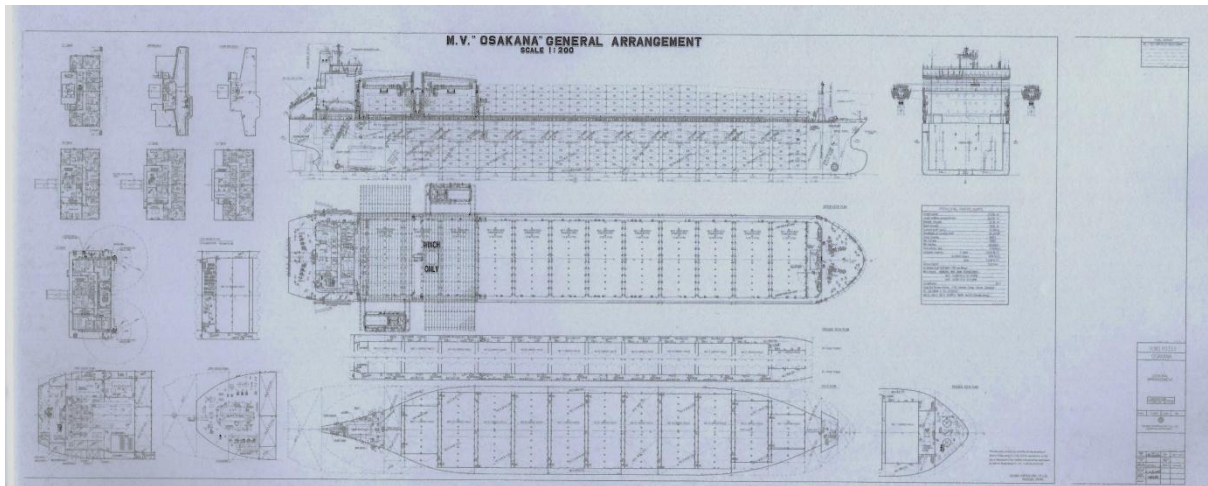


She was built by Oshima Shipbuilding Co. Ltd. at Saikai in Japan as the STAR OPTIMANA, being laid down on 22<sup>nd</sup> March 2003, launched on 10<sup>th</sup> August 2003 and completed on 28<sup>th</sup> October 2003. When built she was of 48,661 dwt with dimensions 199.0m x 32.3m x 12.0m.

On 2<sup>nd</sup> October 2016 she was lengthened to 212.5m which increased her deadweight to 58,599 tons and her draught to 12.3m and gave her an extra cargo hold. She was designed for carrying wind turbine blades and forest products. She has a double hull and has 14 transverse bulkheads providing 12 cargo holds. She is equipped with two 68-ton gantry cranes. She can carry containers with a capacity of 2286 TEU of which 22 units have reefer points.



She is powered by a Kawasaki-MAN B&W 6-cylinder 2-stroke 6S50MC engine of 11,518 kW driving a single screw and giving 16.4 knots. She is owned by Masterbulk Pte. Ltd. of Singapore and operated by Saga Welco of Bergen, Norway. Saga Welco has recently become wholly owned by Nippon Yusen Kaisha (NYK) of Japan.



## THE IRANIAN MOUDGE CLASS FRIGATES



JAMARAN

The Moudge or Jamaran class frigates are the most modern vessels of the type in the Iranian (or Islamic Revolutionary Guard Corp) Navy. Their design seems to have largely reverse engineered from the Alvand class designed by Vosper

Thornycroft and built in Britain for the former Shah of Iran. Six ships of the class have been commissioned with one still building, but three have been lost. All were built at shipyards at Bandar Abbas and were commissioned between 2010 and 2025.



DENA

They are of 1500 tons displacement with dimensions 95.0m x 11.1m x 3.25m. They are powered by four locally made Bonyan 4 diesels totalling 14,700 kW driving 2 screws, giving a top speed of 30 knots and a range of 3000 nautical miles. It was originally intended that the class should have gas turbine propulsion, but because of sanctions etc, diesels were installed. The ships also have four 550 kW diesel generators for auxiliary power.

Their armament consists of a 76mm gun, eight Noor anti-ship missiles, four Sayyad-2 surface to air missiles and two triple 324mm torpedo launchers. They have a landing pad for Bell 212 or 214 anti-submarine helicopters.

For such small vessels, they pack quite a punch, but they clearly have their limitations. They have had an unfortunate life in service, to some extent because of shortages of components during their construction, but also perhaps they tried to cram too much into such a tiny hull.



## SHIPS IN THE CLASS

**JAMARAN:** She was launched on 25<sup>th</sup> November 2007 and commissioned on 19<sup>th</sup> February 2010. She was sunk in a US airstrike at Chah Bahar pier in southeast Iran on 28<sup>th</sup> February 2026.

**DAMAVAND:** She was launched on 28<sup>th</sup> November 2007 and commissioned on 9<sup>th</sup> March 2015. She sank in a storm in the Caspian Sea on 28<sup>th</sup> January 2018. She was raised and scrapped.

**SAHAND:** She was launched on 18<sup>th</sup> September 2012 and commissioned on 1<sup>st</sup> December 2018. On 7<sup>th</sup> July 2024, she capsized during repairs at Bandar Abbas. It is likely that the retrofitting of radar equipment etc. caused her to be top heavy. She was raised and repaired and was recommissioned on 29<sup>th</sup> November 2025. She was destroyed at her mooring at Bandar Abbas by US Forces in early March 2026.



DENA

DENA: She was launched in 2015 and commissioned on 13<sup>th</sup> June 2021. Torpedoed and sunk controversially off the coast of Sri Lanka by the USS CHARLOTTE on 4<sup>th</sup> March 2026. At least 87 of her crew were lost.

DEYLAMAN: She was commissioned on 27<sup>th</sup> November 2023. Reportedly, sh is still active.

ZAGROS: She was launched in 2016 and commissioned on 15<sup>th</sup> January 2025 as a SIGINT (Signals Intelligence vessel) afer an accident during her construction. It is believed that she is still active.

TAFTAN: She was launched in 2017 but has not yet been commissioned.

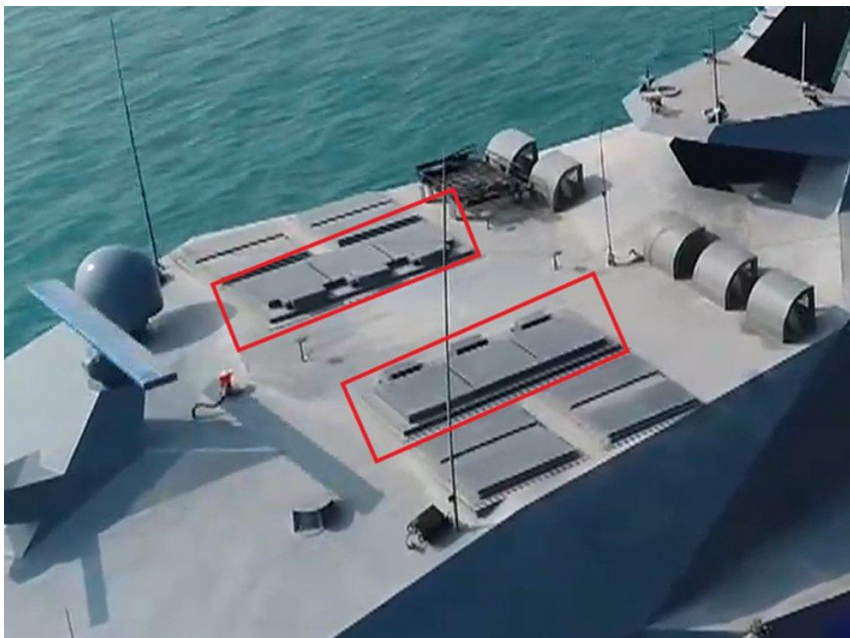
## I.R.I.S. SHAHID SAYYAD SHIRAZI



The SHAHID SAYYAD SHIRAZI was an Iranian SHAHID SOLEIMANI class missile corvette operated by the Islamic Revolutionary Guard Corp Navy and was designed for littoral combat. According to US news reports, she was hit in an airstrike and sank off Bandar Abbas on 4<sup>th</sup> March 2026.



She was built by the Shahid Mahallati Shipbuilding Industries in Bushehr, being commissioned in February 2024, the second in a class of four. Her aluminium catamaran hull had dimensions of 68m x 20m and displaced about 600 tons. Her four indigenously designed and manufactured diesels gave a top speed of 32 knots and a range of 5000 nautical miles.



LS CELLS IN FRONT

OF THE BRIDGE

She was armed with a 30mm cannon, 6 vertical launch system (VLS) cells for surface-to-surface cruise missiles (ABU-Mahdl), 16 VLS cells for surface to air missiles (SAYAD 2/3) ahead of the command bridge, and 6 anti-ship cruise

missiles (4 long-range and 2 medium range) in launchers each side of the bridge. She has a helicopter platform and can carry 3 fast boats.

For their small size, the class appears to have packed quite a punch, although, it would appear, easily sunk by US forces.

## **I.R.I.S SHAHID BAGHERI**



The SHAHID BAGHERI was an Iranian drone carrier operated by the Islamic Revolutionary Guards Corps Navy. It was confirmed on 2<sup>nd</sup> March by the U.S. that she had been struck by US forces and destroyed.

She was built by Hyundai Heavy Industries at Ulsan in South Korea as the Iranian flagged 3280 TEU container ship IRAN KERMAN. She was laid down on 28<sup>th</sup> March 2000, launched on 30<sup>th</sup> June 2000 and delivered in September 2000. She was of 41,978 dwt with dimensions 240.79m x 32.2m x 11.7m. She was powered by a MAN - B & W/ Hyundai 8K90MC 8-cylinder two-stroke single-acting crosshead engine of 36,560 kW driving a single screw and giving 22 knots service speed.



PERARIN

In 2022, she was trading as the PERARIN and was under US Sanctions when she was taken in hand by the Iran Shipbuilding & Offshore Industries Complex near Bandar Abbas and converted into a Drone Carrier. She was commissioned on 6<sup>th</sup> February 2025.



The conversion involved fitting a 180 m long angled flight deck with a ski-jump. She was armed with a 30mm cannon, 8 Noor or Qader anti-ship missiles and 8 Kowsar surface to air missiles. She was recorded as carrying a full flight of Ababil-3N carrier drones; new stealth drones called JAS-313, Homa VTOL drones, a Mohajer-6 drone and some Bell 206 and M-171 helicopters. She had a fully working hospital on board and could deploy over 30 fast attack craft from inside her.



## CAPE DOUKATO



Another Handysize bulker visiting the Thames recently was the Marshall Islands flagged CAPE DOUKATO. She berthed in the Central Branch Dock at Tilbury on 22<sup>nd</sup> February 2026, coming from Rotterdam, to load scrap metal from the adjacent European Metals Recycling (EMR) facility. She departed on the morning of 28<sup>th</sup> February, bound according to the AIS for Jorf Lasfar in Morocco. The AIS also showed her draught to be only 5.7 metres, and if correct, that indicates that she left with a part load of scrap, as her summer draught is given as 9.8 metres.



She was built by the I-S Shipyard Co. Ltd. at Imabari in Japan to their standard IMBARI 28 design as the Panama flagged BELLE ETOILE, being laid down on 28<sup>th</sup> November 2010, launched on 21<sup>st</sup> August 2014 and completed on 8<sup>th</sup> October 2014. She is of 28,280 dwt with dimensions 169.4m x 27.2m x 9.8m. She is geared, with four 30.5-ton cranes located on the ship's centreline between hatches.



She is powered by a single 2-stroke single acting 6-cylinder diesel built by the Makita Corporation of 6150 kW at 136 rpm driving a single screw and giving 16.3 knots. She is not fitted with an exhaust emission scrubber. She is owned by Salimare Maritime Inc. of Athens and managed by Lemar Shipping Inc., also of Athens.



## LEVANTE M

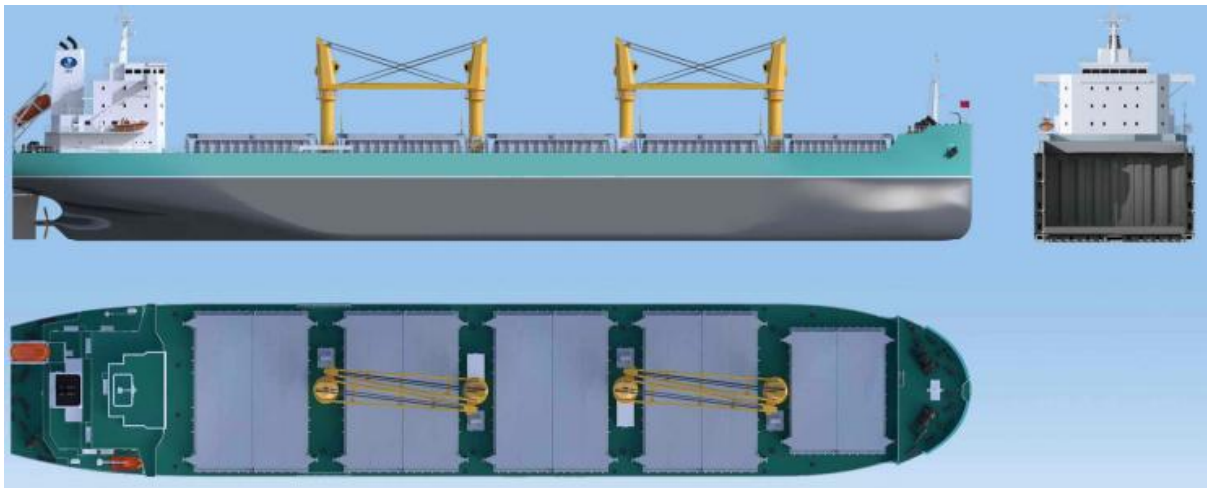


Arriving at Tower Wharf, Northfleet on 24<sup>th</sup> February was the Marshall Islands flagged bulker LEVANTE M, on her Maiden voyage to Europe from Townsville in Queensland, Australia. She is likely to be unloading crude lead or possibly silver for transfer to the adjacent Britannia Refined Metals complex. She is due to depart on 27<sup>th</sup> February for La Corunna, Spain.

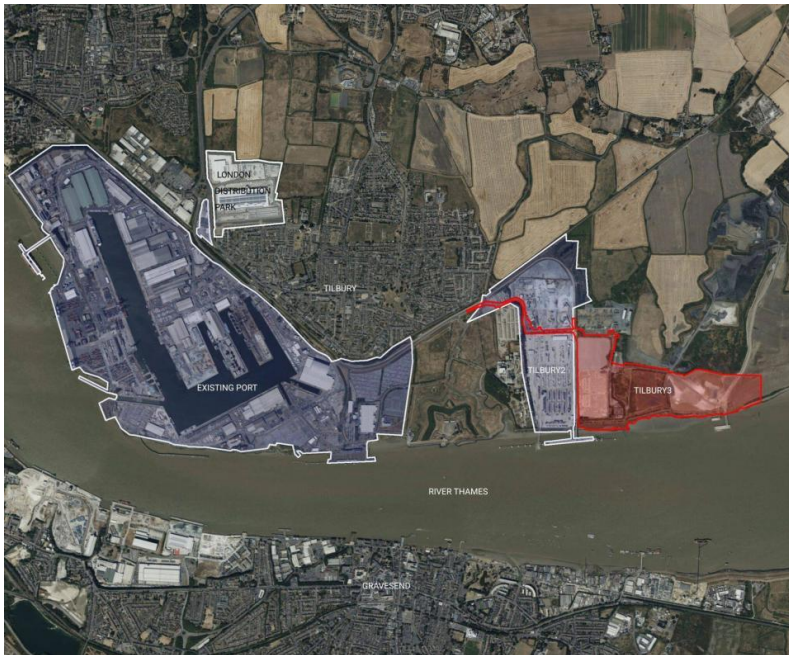
She was built by Jiangmen Nanyang Shipbuilding and Engineering Co. Ltd. In China, being delivered in late 2025. She is of 40,631 dwt with dimensions 179.0m x 30.0m x 11.0m. and is of the Nanyang Type standard bulker, of which over 100 have been built. She is of the open hatch type and geared with four 36 t. She is powered by a low-speed diesel of 6400 kW that meets the imo Tier 111 emission standard and Phase 3 of the Energy Efficiency Design Index. Her cruising speed is 13.5 knots.



She is owned by Wakoh Steamship Co. Ltd. Of Panama and managed by Mybulk Shipmanagement Inc. of Athens.



# Tilbury Port 3



Councillors have signed off on plans for a major expansion of the Port of Tilbury, paving the way for 6,000 jobs and injecting £400 million into the area's economy once operational.

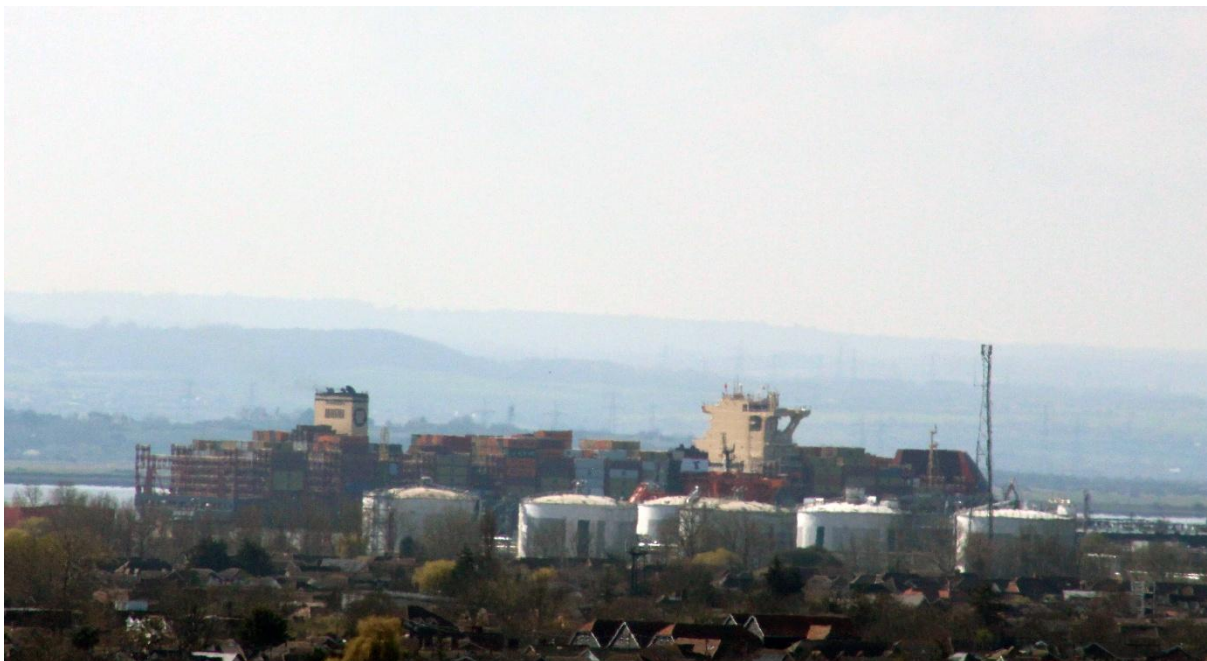
The proposal—known as Tilbury3—was backed at a Thurrock Council planning committee meeting on Tuesday, where representatives for the port argued the scheme would secure the long term future of one of the UK's most strategically important freight hubs.

# VISITORS



**Alula Express** Built 2012 141077 GRT Liberia

Current Position E route Tanger



**Msc Muge** Built 2025 101311 GRT Liberia

Current Position Antwerp



**Star Osprey** Built 2007 30081 GRT Panama

Current Position En route Falmouth



**Myklebust** Built2022 26614 GRT Liberia

Current Position En route Karsto



**Moscow Maersk** Built GRT

Current Position En route Rotterdam



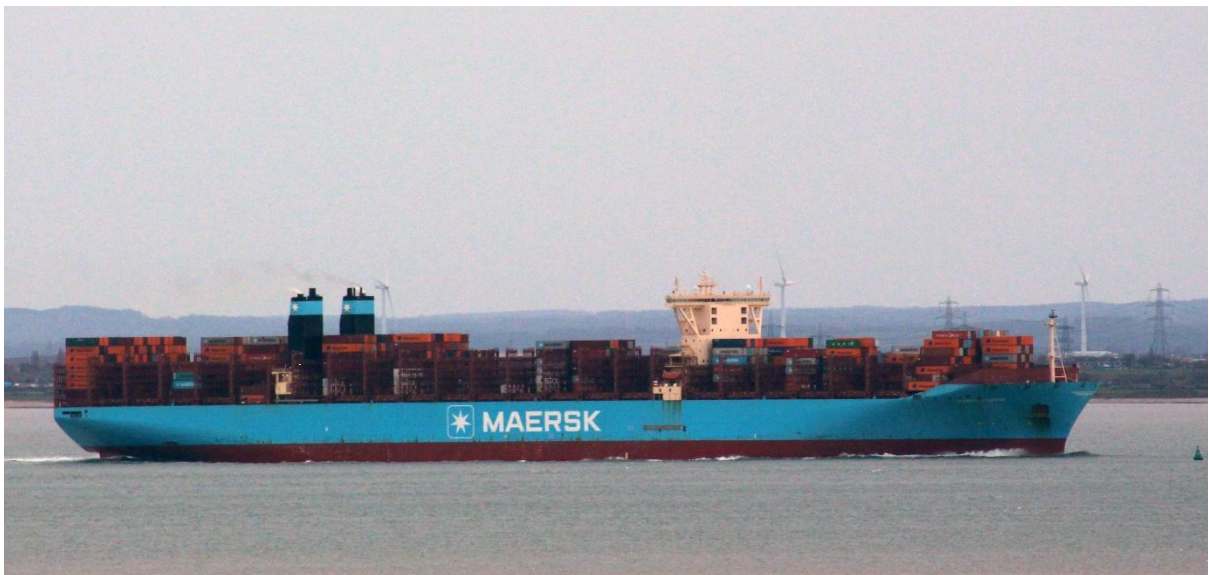
**Gianna** Built 2009 30006 GRT Panama

Current Position En route Tilbury



**Clearocean music** Built 2018 29463 GRT Liberia

Current Position En route Fawley



**Marstal Maersk** Built 2014 194849 GRT Denmark

Current Position Off West Africa en route Singapore



**Lismore** Built 2018 32936 GRT Malta

Current Position En route Tilbury



**Dhamra** Built 2009 397 GRT Belgium



**BG Red** Built 2924 18292 GRT Portugal

Current Position En route Liverpool



**Samskip Express** Built 2006 7852 GRT Portugal

Current Position En route Rotterdam



**Mirai** Built 2023 26583 GRT Marshall islands

Current Position Immingham



**Morten Maersk** Built 2014 194849 GRT Denmark

Current Location N E Atlantic en route Pelepas



**Madison Maersk** Built GRT

Current Location Off West Africa en rote Pelepas



**Maersk Genova** Built 2016 113042 GRT Singapore

Current Position South Africa



**Maastricht Maersk** Built 2019 214286 GRT Denmark

Current Position West Africa en route Singapore



**Msc Alina** Built 2014 94920 GRT Liberia

Current Position West Mediterranean



**Msc Leila** Built 2025 106463 GRT Liberia

Current Location West Africa en route Rio de Janeiro



**Msc Kanoko** Built 2019 14-966 GRT Liberia

Current Position East Africa



**Lianne** Built 2007 1903 GRT Antigua

Current Position En route Northfleet



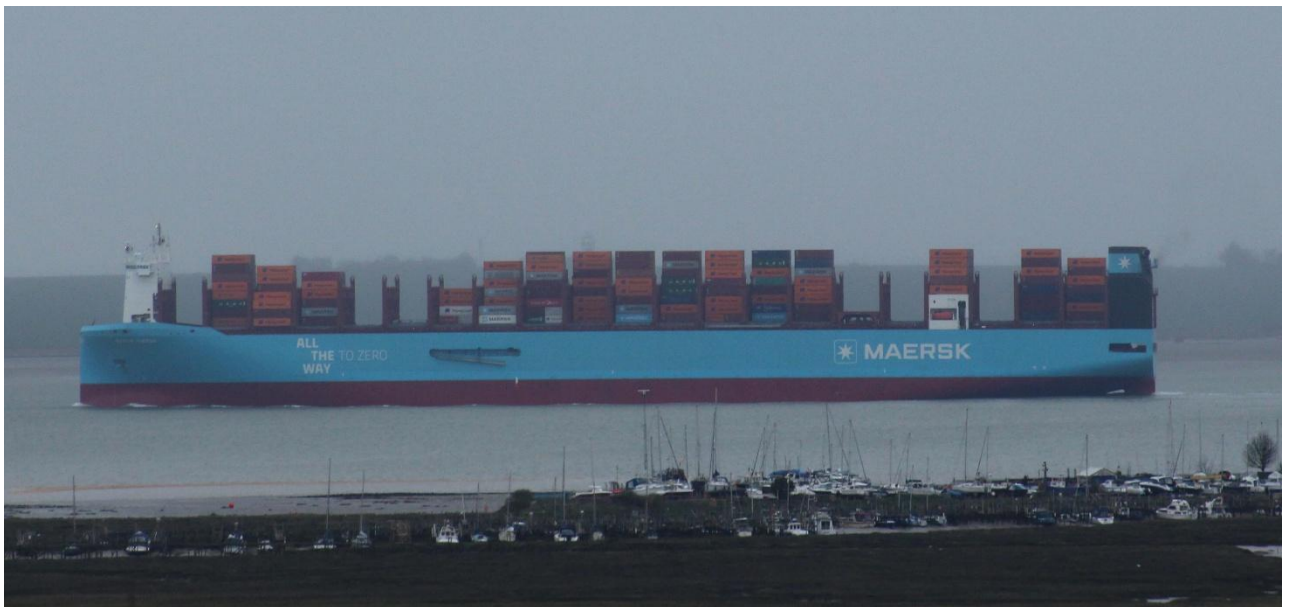
**Manchester Maersk** Built 2018 214286 GRT Denmark

Current position Indian Ocean en route Singapore



**Msc Serena** Built 2025 101062 GRT Liberia

Current Position Caribbean en route Cartagena



**Berlin Maersk** Built 2025 180849 GRT Denmark

Current position South Africa en route Singapore



**Charbel 1** Built 2011 17019 GRT Barbados

Current Position West Africa en route Malaysia



**Minerva Zoe** Built 2019 62508 GRT Greece

Current Position En route Tangerang



**CMA CGM Arctic** Built GRT nd

Current Position En route Savannah

## **NEWS FROM PEMBROKESHIRE**

### **Update on Guard Ship 'Resolute'**

As reported in the January 2026 edition of *News and Views*, the guard ship 'Resolute' (built 1970; 152 gross tons) ran aground in Fishguard Bay during the night of 10<sup>th</sup> - 11<sup>th</sup> December 2025. The four crew were rescued from the shipwreck by the local Fishguard lifeboats – an inshore D-class boat transferring the crew to a Trent class all-weather lifeboat (14-03).

After surveying the damage, one of the first tasks was to remove the 10,000 litres of fuel and oil on board, particularly as this incident occurred within the Pembrokeshire National Park. The area is renowned for its wildlife including seals, porpoise, dolphins, sea duck and, in spring, nesting seabirds such as guillemots, razorbills and fulmars. There are also major populations of breeding puffin, manx shearwater and gannet on the nearby islands.



***The 'Ella B' standing by the grounded 'Resolute'***  
***(Source: Western Telegraph)***

By about the Christmas period, the fuel and oil had been successfully taken off, with photographs from the local newspaper showing the local fishing vessel 'Ella B' (M30) alongside. The 'Ella B' was built in 2023, is 10 metres long and has a gross tonnage of 16. She is based at Lower Fishguard, a small pleasure and fishing harbour, only two to three miles from the wreck.



***Preparations for extracting the fuel and oil from the 'Resolute' (in the background)***

***(Source: Western Telegraph)***

The cause of the grounding does not seem to have been made public. However, the Marine Accident Investigation Branch (MAIB) have now opened an investigation so an interim report should be published in the coming weeks or months.

As of 20<sup>th</sup> March 2026, the wreck of the 'Resolute' was still on the rocks where she ran aground. Externally, she appears much the same as when she grounded in spite of the winter storms in the Irish Sea. HM Coastguard are monitoring the wreck but her removal is the responsibility of the shipowner, the DR Group of Kilkeel, Northern Ireland. Interestingly, standard marine

insurance policies may not cover pollution, salvage and wreck removal costs, so specialist cover is normally required to cover such eventualities. These types of costs are covered by Protection and Indemnity Insurance, often through mutual P&I Clubs.



*The 'Resolute' still on the rocks on 20<sup>th</sup> March 2026*

It has been reported that salvage operations are in discussion, possibly using a floating barge or crane to recover the vessel, although this method may be conjecture at this stage. After three months on the rocks, it still remains to be seen what will happen to the wreck of the 'Resolute'.

## **NEWS FROM SOLENT**

### **Queen Victoria**



# QUEEN VICTORIA SHIP'S PARTICULARS



Thank you for showing an interest in the technical aspects of Queen Victoria.  
Please find enclosed information you may find of interest.  
Thank you from myself and the Technical Team.

Chief Engineer

QUEEN VICTORIA

We got these after our "behind the scenes" 3 hour experience. We have done this on Aurora and both have been very interesting (£75 per person on Aurora and \$120 per person on Queen Victoria) We also go to the food storage, the laundry, the kitchen, the Engine Control room, the forecastle where the mooring winches are, the theatre including the stage and the bridge. On

Aurora we had a talk by the Security Officer and why all PO Cruise ships now have the special extinguisher for Lithium battery fires (Normal fire extinguishers are not suitable).

Bear in mind that Queen Victoria was ordered in the early 2000's and built in 2007 so her equipment is not the latest.

Wärtsilä merged with Sulzer. So Wärtsilä will supply overhauled cylinder heads for the ease of maintenance of the diesel engines. The engineers on Board will carry out all the maintenance. These are done on hours run so there is one engine being worked on whilst the others are available. Depending, whether it is just a cylinder head overhaul (16 per large engine, 12 for the smaller one) to a major overhaul including the most major of strip downs (to replacing all the bearings including the crankshaft main ones) will determine how long the engine is not available. A full major overhaul will take 54 days.

The Cunard ships all use azipods. PO used more conventional propellers except the Arcadia (which was going to be the Queen Victoria) and the new Excel class (Iona and Arvia). The Azipods are more efficient and do away with the need for separate rudders and stern thrusters. The ACS6000C cycloconverters are still the original ones fitted in 2007.



### Garde Manger or Cold Larder

Often referred to as the Cold Larder, this busy area of the galley produces all the cold appetizers, salads, cheese plates etc. for your dining room. It also produces up to 6,500 individually handmade cold hors d'oeuvres in any one voyage, for all receptions hosted by the Captain as well as nightly Canapé service in the bars and Suites.

The Sous Chef in charge will make a 'show plate' of the daily dishes required, his team will then reproduce the same dish hundreds of times over before placing them on 'jack racks' which are wheeled directly into the tall fridges. These are then accessed by the waiters directly as and when they are required, through smaller doors at the front of the fridge.

### Hot Press

The Hot Press is one of the most critical phases of the entire galley operation. The waiter takes your order at the table and writes it down on an order pad for that particular table. It is then brought to the galley where the individual dishes ordered will be marked off on a master sheet, enabling us to capture vital consumption data for each dish. When the waiter is ready to pick up the main course, he will retrieve the check and bring it to the first 'pass' at the forward end of the Hot Press where the Executive Chef, Chef de Cuisine or Food and Beverage Services Manager will be waiting.

Of course, with all those waiters coming in and out of the galley all looking to pick up 'their food' first, some measure of control is needed to maintain order, efficiency, and quality. The waiters will line up against the counter on the side of the Pastry section and one by one will be called to proceed down the press, 'pass' by 'pass'. Here the chefs prepare each individual plate 'a la minute' as they are required by the waiters, they are put up on the pass and are checked for heat, quality and presentation by the relevant chef or manager, and then covered with a plate cover.



### Pastry

This is the single most desirable part of the galley operation due to the nature of foods being produced here, and certainly where the most damage is done. Every single dessert, pith four or pastry item found anywhere on the ship is created here under the watchful eye of the Chef Pâtissier. Using the same system as the Garde Manger the 'show plate' will be copied and placed on the 'jack racks' inside the tall, double-sided fridges, ready for collection by the waiters.

### Production

This section is where all the preparation work is carried out and where the cooking is done. There are several steam ovens, hotplates, grill plates, tilting braising pans, and soup kettles. There is also a small area dedicated to the washing and storing of pots, pans, baking trays etc, so the chefs can simply pick up and drop off whatever utensils they require.

### Verandah Galley

There are a total of 9 separate galley areas each catering to a different food outlet: Grills Galley, Lido Buffet Galley, Lido Grill Galley, Golden Lion Galley, Britannia Deck 3 Galley, Britannia Deck 2 Galley, Bakery/Butchery/Fruit & Vegetable Prep, Verandah Galley, and Crew Galley. The Verandah Galley produces all the exquisite dishes on the Steakhouse at The Verandah a la carte menu. The concept is to recreate the sophistication and culinary experience as was enjoyed on the original Queen Mary and Queen Elizabeth. If you have not already done so we strongly recommend you include this dining experience on your list of things to do before disembarking.



We hope you have enjoyed today's brief but informative glimpse of a ship's galley.

# QUEEN VICTORIA

# QUIZ

## WSS quiz questions – April 2026

1. HMS Dragon has recently been sent to the Middle East to help defend British interests in the area. What type of vessel is HMS Dragon?
2. Where will you find the ship's bell from HMS Lutine which sank in 1799?
3. Which German port, a major hub for containers, cars and cruise ships, is located at the mouth of the river Weser on the North Sea?
4. The UK's Marine Accident Investigation Branch recently issued its report on a 2023 incident aboard which cruise ship? 115 passengers were injured, including one who later died, as the vessel lost propulsion during a violent storm in the Bay of Biscay.
5. What does the abbreviation "LCL" mean in relation to ocean shipping?
6. The UK is building 5 new Inspiration Class frigates. Alongside new type-26 frigates, they will replace the existing type-23 frigates. What type number will these Inspiration Class frigates have?
7. The obsolete destroyer HMS Campbeltown was used in a raid on which port in German-occupied France in March 1942?
8. Which shipping line's logo is a white, seven-pointed star on a pale blue background.
9. Which Scottish port has the registration OB?

10. Why was the French Navy embarrassed in mid-March by use of the fitness app Strava?

## KIROV CLASS “BATTLECRUISERS”



The Kirov class (Project 1144) was a class of cruisers conceived by the USSR during the Cold War in the 1960s. A total of five ships was planned but the fifth was cancelled at an early stage. The other four were commissioned, but since the collapse of the Soviet Union, their operation has been problematic for Russia. All four were renamed after the collapse of the Soviet Union. They are nuclear powered guided missile heavy cruisers built by the Baltic Shipyard in St. Petersburg for the Soviet Navy. They are the largest and heaviest surface warships in the world excepting, of course, aircraft carriers. They are fine looking ships but, especially without aircraft carriers, large and attractive targets and hugely expensive to operate and maintain.



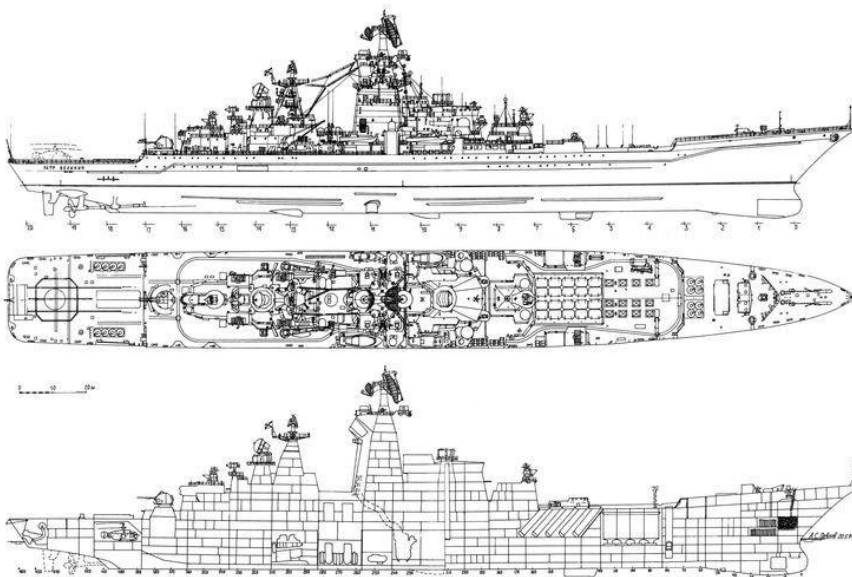
The first ship was the KIROV, later renamed ADMIRAL USHAKOV, which was commissioned in 1980. She entered service in the Northern Fleet in 1981 and remained in service until 1990, when it suffered a reactor incident whilst in the Mediterranean. She was then placed in reserve with plans to repair and upgrade her. However, in 2012 it was reported as being “beyond repair”, and she was due to be scrapped in 2021.

The second ship was the FRUNZE, later renamed ADMIRAL LAZAREV, which was commissioned in 1984. In 1985 she joined the Soviet Navy’s Pacific Fleet but was inactive from 1994. In 1999 she was taken out of service and prepared for scrapping as no money was available for its overhaul. In 2004 to 2005, her nuclear fuel was unloaded. Despite plans to modernise her, in 2019 it was announced that she was to be scrapped in 2021.

The third ship was the KALININ, later renamed ADMIRAL NAKHIMOV, which was commissioned in 1988. In April 1989 she joined the Northern Fleet, but after the end of the Cold War she was rarely deployed, and the last time she went to sea under own power was in 1997. She was towed to Murmansk in August 1999 to undergo repairs. Work started in 2008, but through lack of funds and constant design changes progress was spasmodic. In January 2023 it was announced that loading of fuel and work on the power supply had begun. In August 2025 it was announced that she had left the Sevmash shipyard at Severodvinsk under her own power and started factory sea trials. It has been reported that around \$5 billion was spent over ten years in modernising her.



The fourth and final ship was the YURI ANDROPOV, later renamed PYOTR VELIKIY, which was commissioned in 1998. She has taken part in actions against piracy off the coast of Somalia and in support of the Russian intervention in the Syrian civilwar. She is the present Flagship of the Russian Northern Fleet, but since 2022 she has been laid up in Severodvinsk.



She has not been upgraded like the Admiral Nakhimov in terms of weaponry and is armed with Granit anti-ship missiles, S-300 surface to air missiles,

3K95Kinzhalf surface to air missiles and several anti-submarine missile launchers. She can also carry 3 Kamov Ka-27 helicopters.



ADMIRAL NAKHIMOV

THE ADMIRAL NAKHIMOV: She is of 24000 tons displacement with dimensions 251.1m x 28.5m x 10.3m. She is powered by two KN-3 nuclear reactors and 2 oil-fired two boilers together with two steam turbines in a CONAS configuration driving two screws. Under nuclear power alone she can theoretically make 25 knots, but with combined nuclear and steam turbines, totalling 100,000 kW she can do 32 knots. Ship's complement is 710 officers and men.



ADMIRAL NAKHIMOV

Her current armament is formidable, comprising 80 Kalibr anti-ship missiles, 96 S400 surface to air missiles, 2 no. 4K33 Osa M surface to air missiles, 6 Pantsir-M close in weapons system, a 130mm gun, 10 No. 533mm torpedo tubes, one RBU-6000 and two RBU-1000 anti-submarine rocket launchers. She also carries 3 Kamov Ka 27 helicopters.



ADMIRAL NAKHIMOV

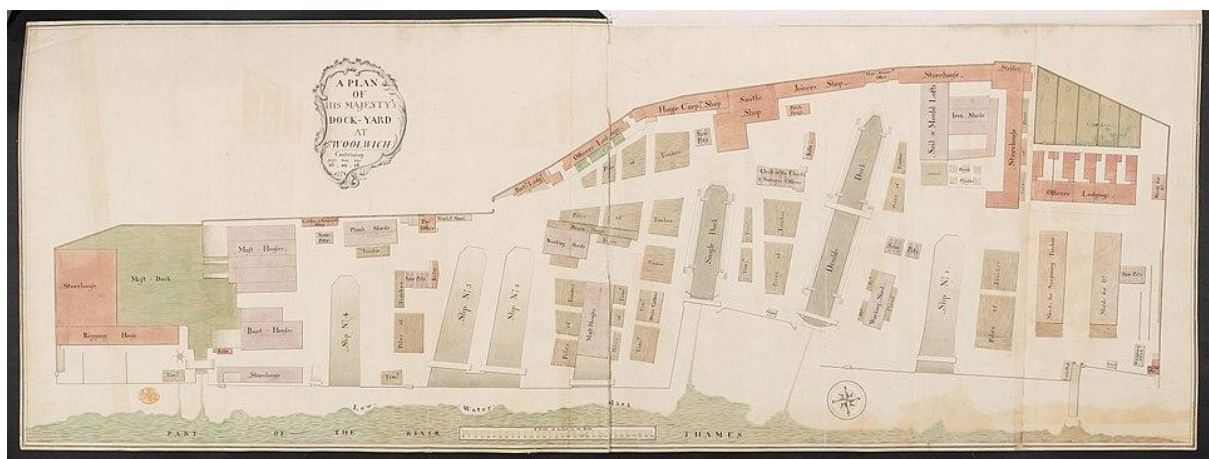
## WOOLWICH DOCKYARD



Woolwich Dockyard (formally H.M. Dockyard, Woolwich, also known as The King's Yard, Woolwich) was where many ships were built from the early 16th century until the late 19th century. The yard continued to be used for

shipbuilding and repair work more or less consistently; in the 1830s a specialist factory within the dockyard oversaw the introduction of steam power for ships of the Royal Navy. At its largest extent it filled a 56-acre site north of Woolwich Church Street, between Warspite Road and New Ferry Approach; 19th-century naval vessels were fast outgrowing the yard, however, and it eventually closed in 1869 (though a large part of the site remained in military hands for a further century). The former dockyard area is now partly residential, partly industrial, with remnants of its historic past having been restored.

Woolwich Dockyard is seen centre-right, and the Parish Church far left. Left to right along the shoreline: three shipbuilding slips (two of which survive, much rebuilt, at Mast Quay), two dry docks (which also survive, much rebuilt) and a further slip (since filled in). Behind the latter stands the large Sail and Mould Loft of 1740, with the Great Storehouse to its right and the Officers' Terrace (houses with gardens) to the right of that; all these were demolished in the early 20th century. Everything west (right) of the Clock House was newly acquired land in 1790; the painting shows planned buildings, including a long ropehouse that was never in fact built.



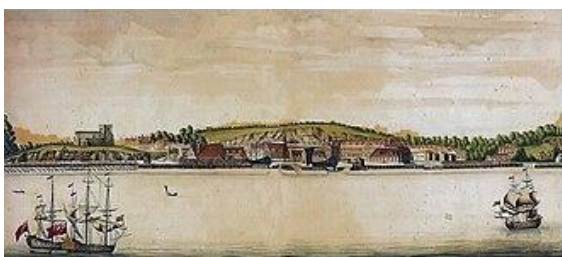
'A Plan of His Majesty's Dock-yard at Woolwich', dated 1774.



c. 1575 illustration of Henri Grâce à Dieu, launched at Woolwich Dockyard in 1514.

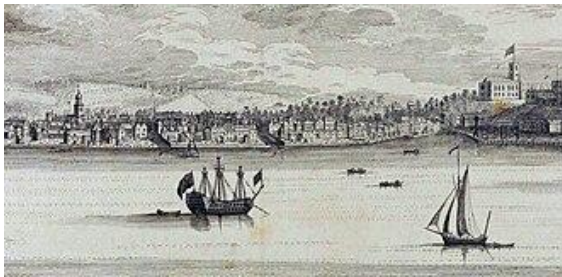
Woolwich Dockyard was founded by King Henry VIII in 1512 to build the new flagship of the Tudor navy, Henri Grâce à Dieu , the largest ship in the world when she was launched.<sup>[3]</sup> The ship was built in Old Woolwich, which is where the dockyard was initially established: past Bell Water Gate, east of the area later known as Woolwich Dockyard. The site consisted of one or more rudimentary dry docks, a long storehouse (for canvas, rigging and other materials) and a small assortment of other buildings. Woolwich was probably chosen for its position – on the south bank of the tidal River Thames close to Henry's palace at Greenwich – and for its proximity to deep water.

Several other ships were built here after Henri Grâce à Dieu, but in the 1520s shipbuilding appears to have ceased (the By 1540, however, the royal shipwrights had begun operating on higher ground further to the west at what was to become the permanent site of the Dockyard, where a pair of dry docks (already in situ and known as "Boughton's Docks") formed the centre of operations. The site was purchased by the Crown in 1546 and in the second half of the century several sizeable ships were built there. The yard was also used for heavy repair work.<sup>[2]</sup>



Woolwich Dockyard in 1698: the recently erected Great Storehouse (centre-right) dominates the built environment of the dockyard.

The two dry docks were rebuilt in the early 17th century and the western dock was expanded, enabling it to accommodate two ships, end to end. In the years that followed, the dockyard was expanded; its facilities included slipways for shipbuilding, timber yards, saw pits, cranes, forges, a mast house and several storehouses. There were also houses on site for the senior officers of the yard. A clock house was built in 1670 (containing a mould loft for drawing up full-scale ship designs) and in 1698 a palatial Great Storehouse was erected. Apart from the brick-built mast house and Great Storehouse, the buildings were almost entirely of timber construction.<sup>[2]</sup>



Old Woolwich as viewed from the river in 1739: Bell Water Gate is in the centre and the Gun Wharf centre-left. The clock tower (left) is part of the Ropeyard. (From an engraving by S & N Buck)

As at other Royal Dockyards, the Ordnance Office maintained a Gun Wharf at Woolwich for storage and provision of guns and ammunition for the ships based there. The Gun Wharf was sited east of Bell Water Gate (where there is now a car park next to the Waterfront Leisure Centre). It was here that Woolwich Dockyard had been founded in 1512 and the Great Harry was built in 1515; when the dockyard had moved to its new, permanent site in the 1540s, the old wharf, crane and storehouse had been given over to storage of heavy ordnance and other items. Gun carriage repair was also undertaken on site. Later, use of the Gun Wharf was shared with the nearby Royal Ropeyard, which maintained a storehouse there for hemp and other materials. The wharf and its buildings were improved and rebuilt at regular points through the 16th and 17th centuries; as late as 1664 a large new brick storehouse was provided "to lodge ships' carriages in".

The wharf was still subject to frequent flooding, however, and from the 1650s the Board of Ordnance began to make use of open land at Tower Place, to the east of the Gun Wharf, as a site for proving and storing cannons and other large guns. Known as 'The Warren', this was the beginning of what would later

become the Woolwich Royal Arsenal. The Ordnance Office withdrew from Gun Wharf in 1671, but the Ropeyard continued to make use of the wharf and its associated storehouses into the 19th century.



Map of 1746 showing 'The King's Yard' (left), old Woolwich (centre), the 'Rope Yard' and 'The Warren' (right).

In the 1570s the Crown established a naval Ropeyard in Woolwich, Too long to fit within the confines of the Dockyard, its parallel sheds lay along the line of present-day Beresford Street. As first built it consisted of a 600 ft 'cable house' along with a series of sheds accommodating different parts of the rope-making process. In 1695–1697 the ropeyard was largely rebuilt, under the supervision of Edmund Dummer; by the end of the century it included a double-ropewalk, 1061 ft long, a parallel single-ropewalk of similar length, a brick storehouse with a clock tower, houses for the yard's senior officers and various other buildings, all enclosed within a perimeter wall topped by watchtowers. Parts of the yard had to be rebuilt after a fire in 1759, and again after another fire in 1813. The ropeyard remained in service until 1832, by which time similar establishments in other Royal Dockyards had begun to come to the fore; the site having been sold in 1833, its buildings were demolished soon afterwards, in 1835.



Woolwich Dockyard in 1750, by John Boydell.

The fortunes of the yard had waned toward the end of the seventeenth century; in 1688 its work was valued at £9,669, in contrast to nearby Deptford (£15,760), not to mention the (by now much larger) Royal Dockyards at

Portsmouth (£35,045), and Chatham (£44,940) In the first half of the eighteenth century, however, it gained a renewed momentum: the site doubled in size, as did the workforce, and even in the first decade of the 1700s there were more ships launched from Woolwich than from any other English yard. Many buildings were built (or rebuilt) at this time, now mostly in brick. On newly acquired and reclaimed land to the east, three new slips were built and a new mast pond was created, along with adjacent mast houses and boat sheds; a sizeable rigging house was also built here. Alongside the Great Storehouse an equally large building, housing both a sail loft and a mould loft, was constructed in 1740. Meanwhile, land acquired to the west enabled a new terrace of officers' houses to be built in the early 1750s.



Woolwich Dockyard, 1789 (by Robert Dodd)

showing the newly built clock house

The yard was further expanded westwards in the 1780s, again almost doubling in size. Much of the area of the expanded dockyard was preserved as open ground for storage of timber, with rows of wooden seasoning sheds; as the Navy's ships were growing in size and number, more raw materials were needed across the Royal Dockyards. Two new mast ponds were constructed, replacing a pond at the eastern end of the site which dated from 1720 but was now considered too small (the new ponds and mast houses could accommodate mast lengths of up to 120 feet ; the old pond, together with its associated buildings, was now given over to the construction and storage of ship's boats. Centrally positioned in the expanded yard, a new clock house was built, containing offices for the various departments of the dockyard, and with it a new main gateway (replacing the old entrance which had been located further to the east).

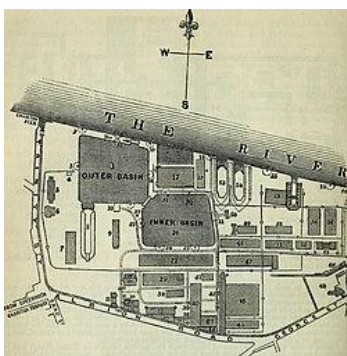


HMS Nelson under construction at Woolwich

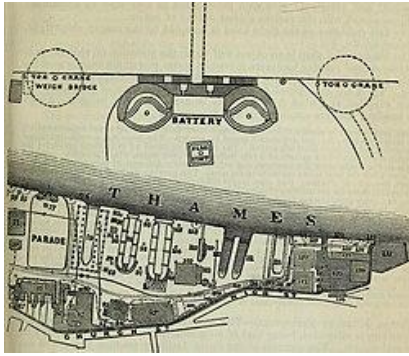
Dockyard in 1814

Later, Shipbuilding continued in earnest during the Napoleonic Wars; but, as ships grew still bigger, the Thames continued to silt up. In 1800 Samuel Bentham, the Inspector-General of Naval Works proposed replacing Woolwich, Deptford, Chatham and Sheerness dockyards with a single new facility on the Isle of Grain; but this, (along with other radical proposals) was not pursued. In 1802 a steam-driven bucket dredger was brought into service at Woolwich but still the silting persisted; nevertheless, the yard continued to be developed: in 1814 a large smithery or metal-working factory was added to produce anchors and other iron items. In the 1820s two new covered slips were added (No.1 and No.2 Slips) large enough to accommodate the latest ship designs. The following decade a substantial part of the river wall was rebuilt in brick and the two dry docks were reconstructed in granite in the 1830s–1840s. Alongside the docks a steam-powered saw-mill was provided, a new workshop with steam hammers and a hydraulic chain and cable testing facility.

Map of the Dockyard in 1854

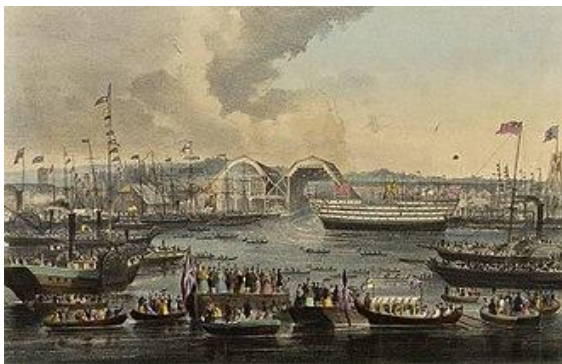


The steam factory complex is just south of the Inner Basin.



The gun battery (shown enlarged) is located just north of the 'Parade'.

From 1831, Woolwich found a new lease of life as a specialist yard for marine steam engineering (a relatively new technology which was being developed commercially at nearby Millwall). New buildings were constructed on the site for steam manufacturing and maintenance, including a boiler shop for manufacturing boilers, foundries for brass, copper and iron work, and an erecting shop for assembling the steam engines; by 1843 all were integrated into a single factory complex, with a single large chimney drawing on all the various forges and furnaces by way of underground flues. Integral to the creation of the steam factory was the conversion of two mast ponds (which lay to the north of what is now Ruston Road) into steam basins, where ships could moor alongside the factory while their engines and boilers were fitted. One of these basins was provided with its own dry dock (No. 1 Dock) which, like the basins, was filled in and built over in the 20th century. The factory was part of the dockyard, but had a high degree of independence: it was accessed by its own gate (known as the West Gate or Steam Factory Gate) and overseen by its own official, the Chief Engineer.



The launch of HMS Trafalgar, Woolwich, June 21st 1841. The ship, launched from No.1 Slip, is to the right (with the Steam Factory visible behind); St Mary's Church tower and the clock house can be seen to the left.

Woolwich retained its primacy as the Navy's steam engineering yard through the 1840s, but following the establishment of large-scale steam yards at Portsmouth (1848) and Devonport (1853) it became increasingly redundant, especially as its basins were no longer large enough for the size of ships now being built. Older ships still came to Woolwich for engine repairs and maintenance, but by the end of the Crimean War the steam factory's days were numbered. Surprisingly though, the dockyard had managed to remain active in shipbuilding and its facilities continued to be upgraded and expanded through the 1850s and early 1860s; during that time a new rolling mill and an armour plate shop were built as well as a sizeable new sail loft and rigging store. Ultimately, though, the yard could not keep pace with the emerging needs of the new ironclad warships, and by 1865 it was clear that both Woolwich and Deptford Dockyards were destined for closure.

#### Administration of the dockyard



The Dockyard c. 1780, by Richard Paton.

Senior officers of the yard lived in the Terrace (the building shown on the far right of the picture).

From 1630 until 1688 the Master Shipwright was the key official at the dockyard until the introduction of resident commissioners by the Navy Board after which he became deputy to the resident commissioner. The Commissioner of the Navy at Woolwich Dockyard held a seat and a vote on the Navy Board in London. In 1748 the dockyard was managed directly by the Navy Board. In 1832 the post of commissioner was replaced by the post of captain-superintendent, who was invested with the same power and authority as the former commissioners, "except in matters requiring an Act of Parliament to be submitted by the Commissioner of the Navy

## HMS FOYLEBANK



The FOYLEBANK was a dry cargo motorship built for Andrew Weir Shipping's Bank Line by Harland & Wolff in Belfast. She was laid down in 1929, launched on 12<sup>th</sup> June 1930 and completed on 14<sup>th</sup> November 1930. She was of 5582 grt with dimensions 426.8'(pp) x 57.3' x 25.8'. She was powered by twin 8-cylinder single-acting diesels built by Harland & Wolff of 830 Nominal Horsepower (NHP) driving 2 screws and giving 13.5 knots.



Like the rest of the Bank Line's ships at that time, she carried out tramping voyages between UK ports and India, East and South Africa and the Americas

carrying general cargoes such as raw materials, manufactured goods and bulk commodities.



HMS FOYLEBANK

In September 1939 she was requisitioned by the Ministry of War Transport and converted by Harland & Wolff into an Auxiliary Anti-Aircraft Ship and was commissioned as HMS FOYLEBANL on 6<sup>th</sup> June 1940. The conversion consisted mainly of reinforcing the deck to cater for four 4" gun turrets and the provision of accommodation for 300. The original diesels were retained. The armament consisted of 8 No. 4" high angle guns, 2No. quadruple 2 pdr pompoms and multiple 0.5" machine guns.



HMS FOYLEBANK

After commissioning she sailed to Portland Harbour to boost its air defences. On 4<sup>th</sup> July 1940 she was anchored off the Southeastern breakwater in Portland

Harbour as a static anti-aircraft defence for the naval base. At about 8 am some 20 Ju 87 Stuka dive bombers attacked her, with 22 direct hits causing large fires to her timber decks and interior fittings. The bridge was hit killing her C.O. and electrical power was lost, causing her remaining guns to be controlled and fired manually.



PUBLICITY IMAGE

The raid lasted just 8 minutes, leaving the ship listing to starboard and ablaze. It was claimed that 3 of the Stukas were brought down by the ship's guns. She sank the following day in 90 feet of water. Manning the starboard quadruple pom-pom guns was Leading Seaman Jack Foreman Mantle who kept the guns firing despite being fatally wounded. He was awarded the Victoria Cross for his gallantry, but wartime censorship imposed an initial media blackout on the sinking and the loss of 176 lives.



SINKING

The remains of the ship were classed as a hazard to navigation. In 1947, the wreck was cut into two and the forward section towed to Falmouth where it was scrapped. The aft section, which contained the magazines etc, proved much more difficult to raise. The salvage vessel KINBRACE and teams of divers were involved for many weeks, but it was eventually raised and towed to Grays for scrapping in 1952.

## **SPANISH GALLEON SON JOSE**

**San José** was a 64-gun galleon of the Spanish Navy. It was launched in 1698 and sank in battle just south of Cartagena in Colombia in 1708, while laden with a massive haul of gold, silver and emeralds.

The ship was built in a shipyard in the Basque region of Spain, close to the French border. Construction started in 1697 and ended in 1698. They built twin ships simultaneously and named them San José and San Joaquín.

San José and San Joaquín were part of the Spanish treasure fleet during the War of the Spanish succession, a European conflict between 1701 and 1714. On its final voyage from Portobelo in Panama to Cartagena in Colombia, San José sailed as the flagship of a treasure fleet which included two other escorting galleons (San Joaquin and Santa Cruz), a lightly armed hulk (Concepción), and 14 merchant ships. On 8 June 1708, the fleet encountered a British squadron near Barú, leading to a battle known as Wager's Action because the squadron was led by Commodore (later, Admiral) Charles Wager.

*There were four ships in the squadron: Expedition, Kingston, Portland and Vulture. In April the squadron took in supplies on a small island just 30 miles away from Cartegena. The Spanish were aware of their presence, and the governor of Cartagena sent warnings to the Spanish fleet. Nevertheless, the commander of the treasure fleet decided to sail from Portobelo to Cartagena on 28 May. He could not wait much longer as the hurricane season was approaching and the rest of the fleet, plus their escort were waiting in Havana and threatened to leave without him.*

*The gold and silver were concentrated on the 3 largest vessels. It is believed that the San José had 7 to 11 million pesos on board, and the San Joaquín 5 million. The Santa Cruz had the rest, only a fraction of the other two ships.*

The Spanish fleet reached Isla Baru on the evening of 7 June and anchored there. On the next day at around 3 p.m. they noticed Wager's squadron approaching. The Spanish took up defensive positions, but the British knew they had to attack the largest ships, because they had the most money on board. The Kingston attacked the San Joaquín around 5 p.m. which, after two hours of battle, escaped into the night. The Expedition attacked the San José and approached the vessel with the clear intention of boarding the ship. Around 7 p.m., after 90 minutes of fierce fighting and with only 60 metres between the two ships, the San José suddenly blew up as its powder magazines detonated. The ship sank immediately, taking its precious cargo and almost the entire crew to the bottom of the sea. There were only 11 survivors out of the 600 crew and passengers on board; the captain went down with his ship.

In the light of a full moon Wager succeeded in finding the Santa Cruz at 2 a.m. After a brief fight, which left 14 British and 90 Spanish dead, the Santa Cruz was taken; however, she had no government treasure in her - only 13 chests of pieces of eight (Spanish dollars in the form of silver coins) and 14 ingots of silver which seem to have been private property. At dawn, the British discovered the San Joaquín, and Wager ordered the Kingston and Portland to capture the ship. After a few salvos, however, the San Joaquín successfully escaped towards Cartagena harbour, and the British decided against following. The rest of the Spanish fleet also reached Cartagena safely, except the hulk Concepción which, cornered by the British, beached itself on Baru Island where the crew set the ship alight.

The British had prevented the Spanish fleet from transporting the gold and silver to Europe and funding the Franco-Spanish war effort during the War of the Spanish Succession. Although Charles Wager became a rich man, he was disappointed with the treasure captured because it could have been many times larger if they had captured the San Joaquín. The captains of both Kingston and Portland were court-martialled for this failure and duly dismissed from their posts.

### **The wreck of the San José**

The wreck of the San José is estimated to be worth billions of dollars. This is based on the speculation that it had 11 million pesos in coins on board at the time of its sinking, made from silver and gold from mines in Bolivia. They could be worth up to \$17 billion, but do you make an estimate based on the weight of the gold and silver or do you look at what collectors might pay for these coins? Or do you consider the cultural and historical value?

The enormous value of this cargo has led to San José being called the "Holy Grail of Shipwrecks". There are three key questions: Where is the wreck of the San José, who has ownership rights to its cargo and what should happen to it?

We know the answer to the first question. The wreck was discovered at a secret location in 2015, although the first robotic exploration only began in 2024. However, years later, a debate still rages over who owns the treasure and what should be done with the wreck.

A US-based salvage company, Glocca Mora, claimed to have found the wreck in the 1980s. It tried to persuade the Colombians to go into partnership to raise the treasure and split the proceeds, but the two sides could not agree on who should get what share, and started a legal battle.

In 2015, the Colombians said they had found the ship, independently of the information provided by the Americans, on a different part of the seabed. Since then they have argued that Glocca Mora, now known as Sea Search Armada, has no right to the ship or its treasure. Sea Search Armada claim that this supposed later Colombian discovery in a new, secret location, was actually in the same location discovered by them, and this was merely a ruse to invalidate previous claims. Sea Search Armada has taken Colombia to the UN's Permanent Court of Arbitration, seeking £7.8bn.

The Colombian government says it wants to raise the remains of the vessel and put it in a museum. In November 2025 the first items were hauled up from the wreck and inspected – three gold and bronze coins, a cannon and a porcelain cup were revealed. But archaeologists say the wreck should be left where it is. Maritime historians point out that the San José is a graveyard where around 600 people drowned and should be respected as such.

The Spanish state has staked its claim, arguing that San José and its cargo remain state property, as it is a “ship of state” belonging to the Spanish Navy when it was sunk and its contents are protected under a UN convention that Colombia is not party to. Indigenous groups from Bolivia and Peru say they are entitled to at least a part of the treasure. They argue that it is not Spanish treasure because it was plundered by the Spanish from mines in the Andes during the colonial period.

The legal framework governing shipwrecks right now is neither clear nor comprehensive, and international law does not have clear-cut answers.



*Wager's Action off*

*Cartagena* by Samuel Scott c. 1747 (in the National Maritime Museum's collection). Wager's ship, *Expedition*, is shown in the centre, attacking the *San José*.

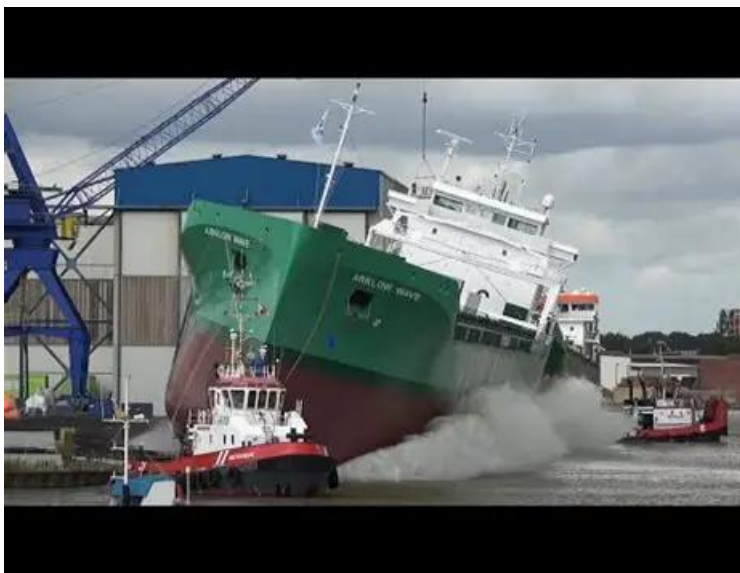


The marine scientific research vessel "*Simon Bolivar*", used for the exploration project

## ARKLOW WIND



Another caller at the EMR complex recently was the Irish flagged general cargo vessel ARKLOW WIND. She arrived from Gravelines on 26<sup>th</sup> February, berthing in the East Branch Dock, presumably to load scrap metal. She is due to depart on 2<sup>nd</sup> March for Ghent. She is owned and managed by Arklow Shipping Ulc of Arklow.



THE LAUNCH

She was built by the Scheepswerf Ferus Smit Yard at Leer in the Netherlands, being sideways launched on 1<sup>st</sup> March 2019 and delivered to Arklow Shipping that April. She is of 16,861 dwt with dimensions 149.5m x 19.25m x 8.605m. She is one of four twin box hold sisterships built by Ferus Smit for Arklow, the others being ARKLOW WAVE, ARKLOW WILLOW and ARKLOW WOOD. They are twin hulled and Ice Class 1A, meaning that they are designed for brash ice up to 1 metre thick.

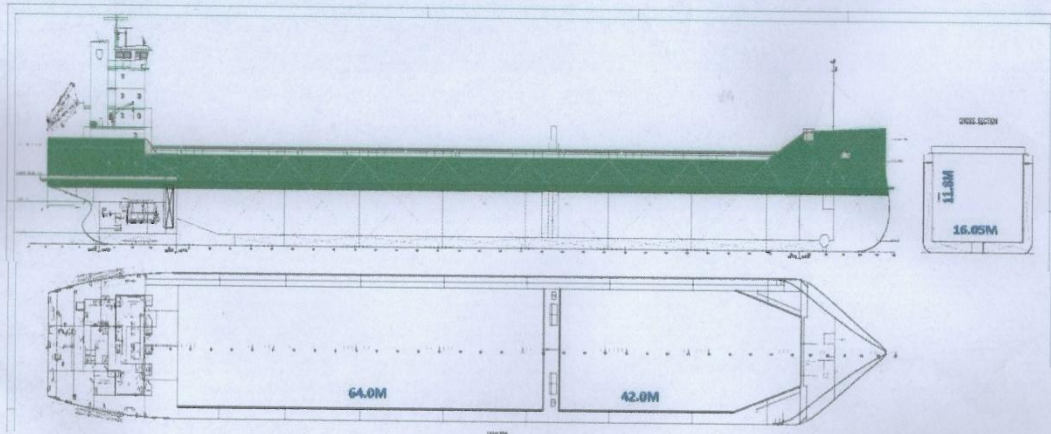


The ARKLOW WIND is powered by a single MaK 8M32C heavy-duty four-stroke medium speed 8-cylinder diesel of 3840 kW driving a single screw which is in a duct to provide enhanced thrust at lower speeds. Her service speed is 13.5 knots. No exhaust emissions scrubber is fitted. The system complies with IMO Tier 11 emissions standards.

On 6<sup>th</sup> June 2024, she berthed at Longyearbyen in Norway to load coal. Under a new local law, Arklow Shipping were fined 1 million Norwegian Crowns (about \$105,000) for having heavy bunker oil in some of her tanks. Arklow are appealing against the fine.



## ARKLOW WIND General Ship's Particulars



## YARROW & CO. THE LONDON YEARS



Yarrow's Yard

THE FOLLY YARD

The well-known warship building firm of Yarrows is now part of BAE Systems Surface Ships, based at Scotstoun and Govan on the Clyde. The origins of the firm, however, are much closer to home. Alfred Yarrow founded the firm in

1865, leasing waterside premises at Folly Wall in Poplar. At first the firm produced launches of various types, but increasingly for fast steam launches.

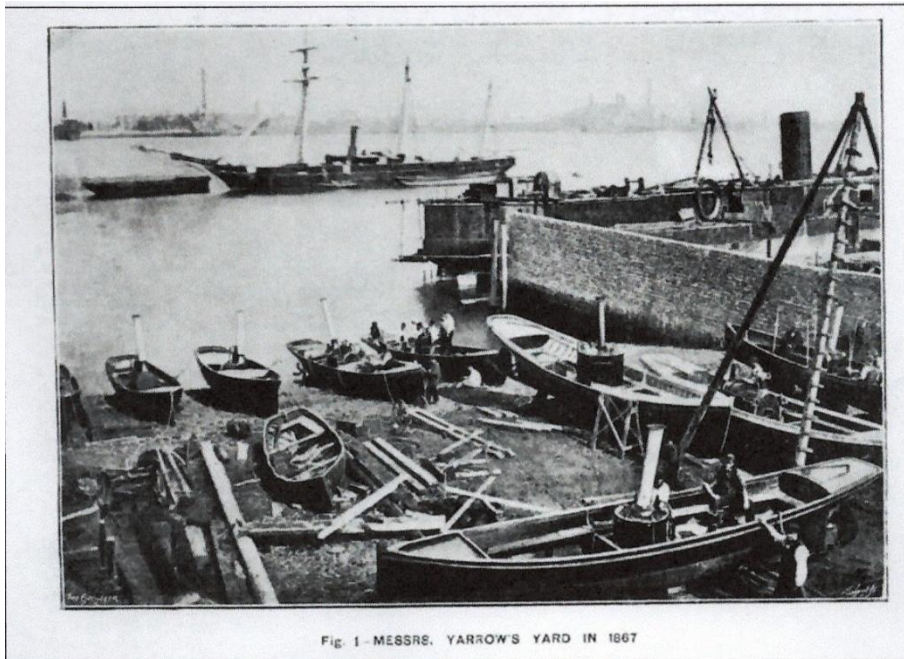
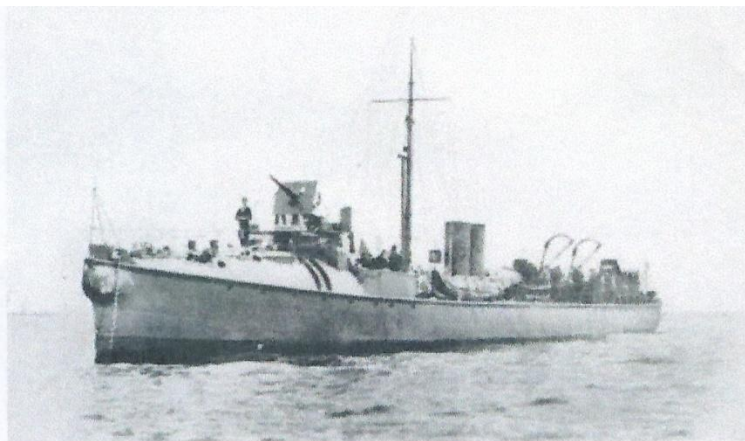


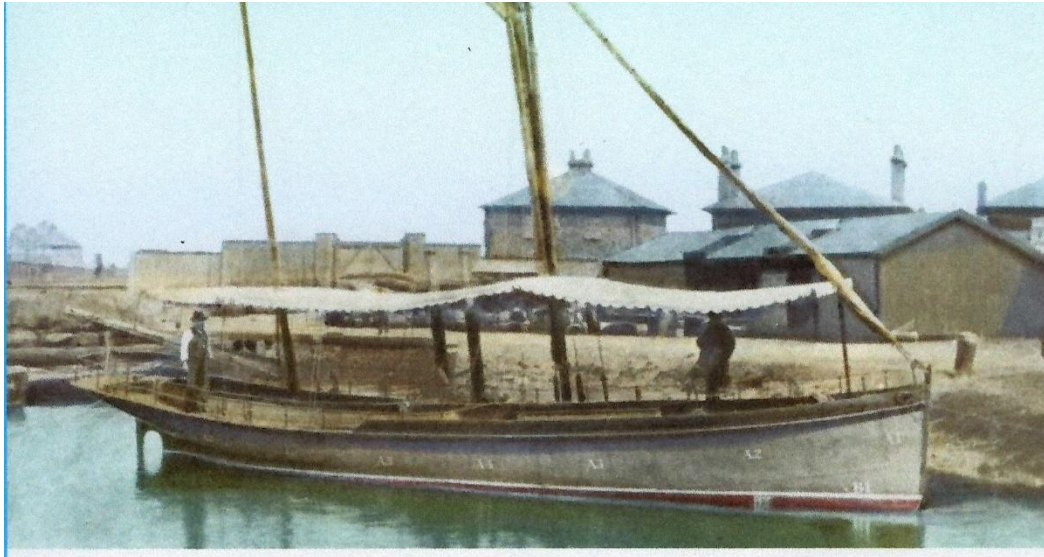
Fig. 1 - MESSRS. YARROWS' YARD IN 1867

Despite a very small and constricted site, the firm began to build larger vessels, including HMS Havock and HMS Hornet, the Royal Navy's first torpedo boat destroyers in 1893. They were followed by the 4 Corrientes class destroyers, slightly improved Havocks, for the Argentine navy in 1896-97. Being based on the Isle of Dogs, Yarrows were not restricted by low bridges on their delivery voyages down the Thames. Thornycrofts who were building similar sized ships in their yard at Chiswick, had to design removable masts and funnels for their larger products.



**HMS Havock.**

Apart from shipbuilding itself, Yarrows were boilermakers, and they developed High Pressure water-tube boilers. HMS Hornet had the first installation in a destroyer. Their system was developed into the Admiralty three-drum boiler between the wars. In the 1930s, Yarrow boilers were used for the propulsion of the RMS Queen Mary, which had 4 boiler rooms each with 6 massive boilers.



In 1875, Yarrows completed the SS LLala for the Livingstonia Mission. She was 48' long and weighed 21 tons. She was built with bolted connections, and designed so that she could be dismantled into units that could be carried by 2 men. She was taken by ship from Millwall Dock into the Zambezi, and then travelled under her own steam up the Zambezi and Shire rivers. She was then dismantled and carried by 600 porters up 100 km of rapids and cataracts, before finally reaching Lake Nyasa. She was the first steamer on the lake, and was introduced against the slave dhows that plied the lake at that time. She reportedly finally sank in 1922.

Also in 1875, Yarrow completed the NMS Randunica, a spar torpedo boat for the Romanian navy. She was 46' long and weighed 10 tons, and a 150 HP steam engine gave her a speed of 8 knots. In May 1877, during the War of Independence, she sank the 400 ton Ottoman ironclad river monitor Seyfi on the Danube. She was modernised in 1900 and carried 2 conventional torpedoes in wooden tubes. In 1917 she fired 2 torpedoes and sank an Austro-Hungarian fuel barge.



Between 1898 and 1904, Yarrows built 7 passenger vessels for the Wanganui Settlers River Steamship Company of New Zealand. They were built as kits and assembled in New Zealand. The Waimarie and the Waiora have been restored, and the Ongaru is awaiting restoration. The Waimarie of 1899 is a paddle steamer of 80 tons with a coal fired double-acting steam engine.

Destroyer construction continued with 6 Ikazuchi class for Japan in 1898-99 followed by 6 of the River class for the Royal Navy in 1903-05 and the Thyella class of 4 destroyers for the Greek navy in 1906-07.



Yarrows had been hit quite badly by the engineers' strike of 1897-98, and the high London rates and the high cost of materials and labour. This led to another move, this time to a greenfield site at Scotstoun near Glasgow, between 1906 and 1908. Most of the firm's machinery and 300 of its workforce were transferred to the new site. For similar reasons, Thornycrofts left the Thames around this time, but they chose to relocate to Southampton rather than Glasgow.

#### HMS HAVOCK

Havock class destroyer. Completed by Yarrows in 1893, she was of 275 tons displacement. Two locomotive-type boilers and 2 triple expansion steam engines onto 2 shafts giving 27 knots. She was armed by 1 x 12 pdr and 3 x 6

pdr with 3 torpedo tubes, 2 on a turntable towards the stern and 1 in the bow. The bow torpedo tube was later removed as the ship had a tendency to outpace its own torpedoes when running at high speed. In 1899-1900 she was re-boilered with conventional ship water-tube boilers, changing from 2 to 3 funnels. She was sold in May 1912 and broken up.

## HMS RIBBLE

One of 36 River class destroyers, HMS Ribble was completed by Yarrows in 1904. Her displacement was 590 tons standard, and 4 Yarrow type water tube boilers and 2 vertical triple-expansion steam engines developed 7000 SHP and 25.5 knots. She was armed with 1 x 12 pdr, 5 x 6 pdr and 2 x 18" torpedo tubes. After the Russo-Japanese War of 1904, the 6 pdrs were replaced by 3 x 12 pdrs. She was broken up in 1920.

## RFA ARGUS



In the news recently was the RFA ARGUS, which has been effectively laid up in Portsmouth Harbour since summer 2025. She was declared “Unfit to Sail” to her home port of Falmouth for refitting, and in January 2026, it was announced that she will be scrapped.



CONTENDER

## BEZANT

She was built as the UK flagged Ro-Ro ferry and 1108 TEU container ship CONTENDER BEZANT by Societa Italiana Erneste Breda at Marghera near Venice for Contender 2 Ltd with Sea Containers as managers. She was launched on 28<sup>th</sup> November 1980 and completed on 31<sup>st</sup> July 1981.



CONTENDER BEZANT

When built she was of 11,445 gt with dimensions 175.1m x 30.4m x 8.1m. She was powered by twin Lindholmen Pielstick 18-cylinder 18PC2.5V diesels of 17,450 kW combined driving 2 screws and giving 18 knots. She also has a bow thruster.

In 1982 she was rapidly converted for the M.o.D., when she was one of the Ships Taken Up From Trade (STUFT) for ferrying Sea Harriers and helicopters to

the south Atlantic. She arrived in the war zone in June 1982 carrying 9 helicopters, 4 Sea Harriers and numerous vehicles that could be offloaded over ramps. She was returned to her owners in November 1982. Between August 1983 and January 1984, she was laid up in the River Blackwater while her future was discussed between the MoD, Harland & Wolff and Cammell Laird.



RFA ARGUS

She was acquired by Harland & Wolff on 1<sup>st</sup> March 1984 for £18 million, and a four-year long conversion costing £45 million into an Aviation Training Ship began. As originally designed as a container ship, she would have been too stable, when unloaded, making her motion at sea too stiff and not appropriate for helicopters. Therefore, her superstructure was removed along with her gantry cranes and one funnel and it was rebuilt deliberately heavily (weighing 800 tons) and 1800 tons of concrete was carried on her former hatch covers. She was renamed RFA ARGUS on 25<sup>th</sup> March 1987 and commissioned on 1<sup>st</sup> June 1988.

Her displacement as an RFA ship is 28,081 tons. Her range is 20,000 nautical miles at 10 knots and her complement is 80 RFA personnel, 137 Royal Navy Air Squadron or 200 nursing and medical staff when acting as a hospital. When fitted, her armament consists of a Phalanx CIWS, two 20mm cannons and 4 machine guns. She has 3 helicopter spots and has a lift and hangar for up to 6 helicopters.

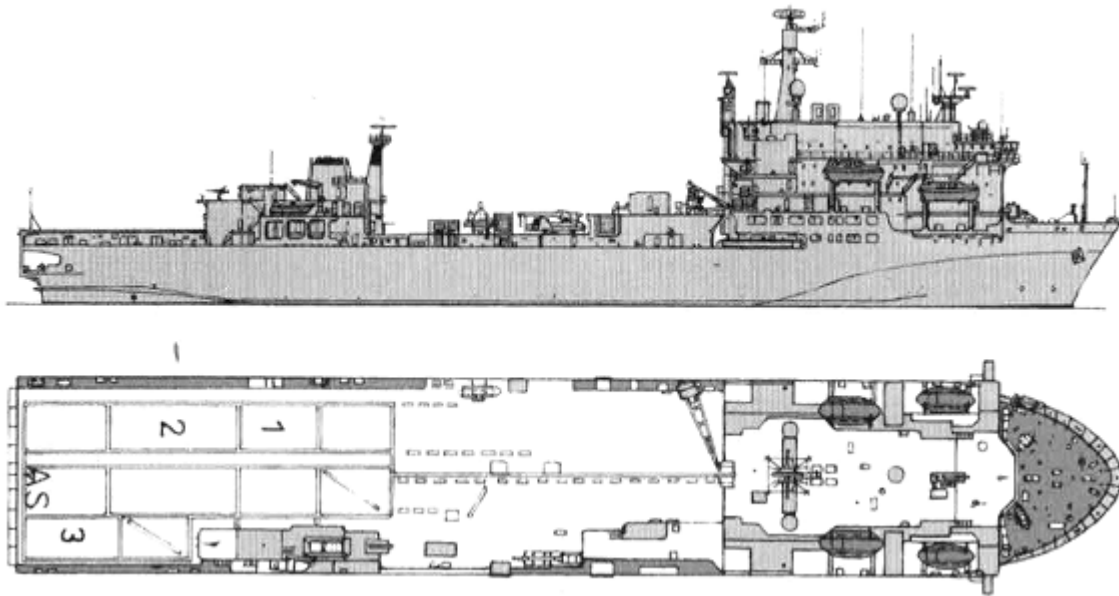


In 1991, during the Gulf War, she was fitted with a fully equipped hospital to assume the additional role of Primary Casualty Receiving Ship and in 2009 this became her primary function. As well as the Gulf War, she served in Bosnia, Kosovo and assisted during the Ebola Crisis.



RFA ARGUS

In July 2022 it was reported that she would assume a Littoral Strike Role after a refit, and in October 2023 she started a deployment serving as part of Littoral Response Group (South). She had the capability to refuel ships at sea, for example in April 2024 when she replenished the RFA LYME BAY in the Indian Ocean.



She had been due to remain in service beyond 2030, but she was out of service in mid-2025 and effectively laid up in HMNB Portsmouth. It had been intended that she would move to Falmouth for a refit, but she was declared “Unfit to Sail” in late 2025. In February 2026 it was confirmed that she will be scrapped. On 23<sup>rd</sup> February she was due to depart the Victory Jetty in Portsmouth for Falmouth under tow by the tugs S.D. TEMPEST and S.D. BOUNTIFUL, but this was delayed because of the weather. She finally departed from Portsmouth on 3<sup>rd</sup> March. Tugs now involved, as well as the Tempest and Bountiful, were the VB ENGLISHMAN assisting while still in Portsmouth and the EN AVANT 26 and 30 which undertook the tow to Falmouth. Once there, she will be de-stored before being sold for scrap.



READY FOR THE TOW TO FALMOUTH



TOW STARTED

Although her hull and machinery are getting rather long in the tooth, it is sad to see the navy losing a very capable ship, the last veteran of the Falklands War in RN active service.

## THE TUGS



VB ENGLISHMAN

- 1) VB ENGLISHMAN: She is UK flagged and an Azimuth Stern Drive tug operated by Boluda Towage UK. She was built by Damen in 2014 as the BAUS and is of 248 gt with dimensions 24.4m x 9.15m x 4.4m. She is powered by twin Caterpillar Type 3512 HP diesels of 2355 kW combined giving a bollard pull of 50 tons.



SD BOUNTIFUL

- 2) SD BOUNTIFUL: She is a UK flagged ASD tug and is operated by Serco Marine Services. She was built by Damen in Poland and the Netherlands

in 2019 and is of 271 gt with dimensions 29.1m x 10.0m x 4.8m. She is powered by twin Caterpillar 3512C HD diesels of 3000 kW combined at 1600 rpm giving a bollard pull of 43 tons.



SD TEMPEST

- 3) SD TEMPEST: She is also an ASD tug built by Damen in Poland in 2017 and is operated by Serco Marine Services. She is of 495 gt with dimensions 32.9m x 12.6m x 6.5m. She is powered by three Caterpillar 3512C HD diesels of 1765 kW each at 1800 rpm and giving 81.7 tons bollard pull.



EN AVANT 26

- 4) EN AVANT 26: She is a Dutch flagged ASD tug built by Damen in Vietnam in 2024. She is operated by Muller Dordrecht and is of 448 gt with dimensions 32.7m x 12.8m x 6.2m. She is powered by twin Caterpillar 3516C diesels of 2525 kW each at 1800 rpm giving 90 tons bollard pull.



EN AVANT 30

- 5) EN AVANT 30: She is also a Dutch flagged ASD tug built by Astilleros Armon Vigo in Spain in 2011 as the RIGEL. She is of 927 gt with dimensions 40.6m x 14.4m x 7.3m. She is powered by twin MAN 9L 27/38 diesels totalling 6750 kW at 800 rpm giving a bollard pull of 120 tons.

## THE TYPE 45 DESTROYER TALE.

There seems to be something wrong with our bloody ships today” Admiral Beatty Jutland 1916

It had long been recognised that the Royal Navy needed a new class of ship as indeed did NATO

Several years of wrangling with our NATO “Allies” failed to produce a design brief

April 1999 saw the start of the development of the Type 45

Displacement: 8700-9400 T

Speed: To be in excess of 30 kn

Length : 152 M

State of the art air and ship defence missile and radar systems

Complement: 191 with Accommodation for 235

Cost : £1 billion each ,actual 1.5 billion over run and still rising

Planned: 12 originally 6 Built

Marconi Electronic Systems were appointed the main Contractor, what they could bring to the party in the way of shipbuilding experiences gives one room to wonder, a week after the contract had been signed they merged with British Aerospace to form BAE who would carry out the design normally done by the MOD

The first ship eventually entered service 2008/9

These vessels have an innovative drive system I.E.P ( integrated electrical power)

The USN has explored this concept and have one ship configured as IEP but appear to have given up on the idea although in the 1920`s they had successfully used turbo electric power to drive an aircraft carrier the USS Langley power being DC

Other ships using IEP include the A/C carrier Q E and the Cunarder QE2

Type 45 would utilise AC power

Power to be generated using a gas turbine with a recuperator, this drives a generator to produce 21Mw + this is fed to a 20Mw (27K HP) General Electric Power Conversion advanced induction motor for the main propulsion, there are two "trains"

Electric propulsion is thought to be more fuel efficient and quieter in operation

There is less stress on the drive shafting due to its being shorter in length EP, offers more positive control and acceleration also provides for a more flexible layout

Two auxiliary 2Mw diesel gen.sets are installed to provide the power for the weapons system and domestic/hotel services, this is a departure from normal practice where the load would be calculated and divided between two

machines with a third set as standby, so two running one on standby, has worked for years.

### **Engines Selected**

BAE offered General Electric GT's type LM 2500, an engine with a good record, many built, 2200, 15 million hours running and in use by 30 Navies worldwide.

An alternative Rolls Royce engine WR-21, at the time still in development and untried in service. Politics came in to the equation as there was an election due and it was thought prudent to go with the UK offering, after all its Rolls Royce what can go wrong?

Sea Trials proved promising 30Knots being achieved in a little over two minutes

### **Problems**

The selected engine was a joint design between RR & Northrop Grumman who designed the Recuperators, these provide combustion air to the GT by heating inlet air through a heat exchanger and injecting hot air into the combustion chamber, reducing fuel consumption and thermal footprint.

Unfortunately there is an inherent design fault that causes the GT's to trip out which in turn overloads the Diesel sets causing them to trip. Nett result complete black out. Apparently this was known at the start of the project and was believed to occur only in warm water areas, it was thought that the effect would occur gradually allowing the Engineer to make appropriate adjustments instead, the shutdown was catastrophic resulting in a total loss of power

Does not seem to matter what the ambient temperature is there have been failures in northern waters as well as the Gulf, although diesels are sensitive to warmer air and cooling water temperatures and have to be de rated.

Subsequent review concluded that insufficient testing had been undertaken evidenced by the fact that RR have now built a new test facility to develop the WR21 and a new aero engine

### **Solution**

After six years of problems a remedial programme has been agreed.

£280 million has been set aside for the Power Improvement Project

The two 2 mw gen sets will be replaced with three 3Mw sets, ships will have to be dry docked holes cut in the side and the redundant plant removed, Rolls are apparently developing their own intercooler and when tested could be retrofitted in 4weeks.

In the meantime the Royal Navy is saddled with these ships which are really state of the art and once the power issue is resolved will provide long service, the engine itself has proved reliable

### **Culpability**

Once again the taxpayer picks up the tab, it is thought that the bill will amount to another billion pounds, failure to get the ships serviceable will impact on the protection needed for the aircraft carrier Queen Elizabeth which itself has questionable air defence capabilities.

It was thought that these ships would not need a refit for 25 years, it will take 10 years to sort this out

## **RFA WAVE KNIGHT AND RFA WAVE RULER**

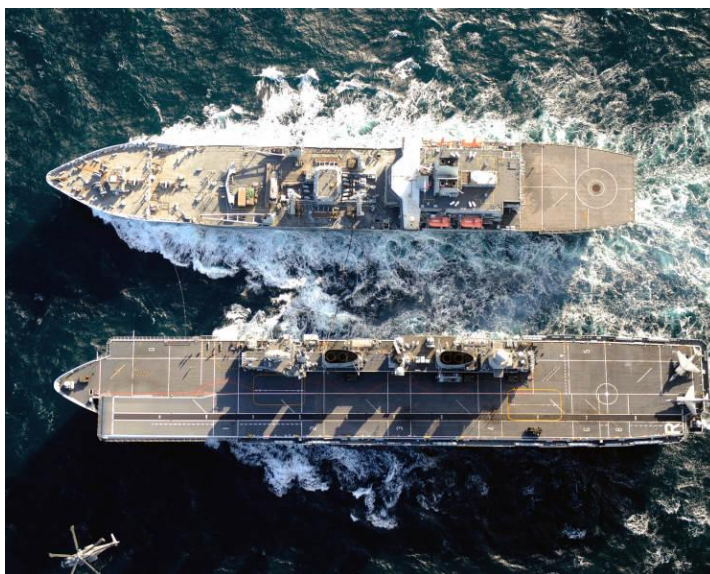


It was announced in late February 2026 that the two Fast Fleet Tankers RFA WAVE KNIGHT and RFA WAVE RULER would not be sold to Brazil, as had been expected. Instead, they will be sold to Inoceca, a privately owned company with its HQ in Quebec City and will remain available to NATO navies. The ships will

be re-activated to full operational readiness under class and flag requirements and will be operated by companies within the Inoceca group to support NATO navies.



The two vessels were purpose-built for the Royal Fleet Auxiliary service, the Wave Knight by Vickers Shipbuilding and Engineering at Barrow and the Wave Ruler by Kvaerner at Govan. The Wave Knight was laid down on 22<sup>nd</sup> October 1998, launched on 29<sup>th</sup> September 2000 and in service on 8<sup>th</sup> April 2003. The Wave Ruler was launched on 9<sup>th</sup> February 2001 and in service on 27<sup>th</sup> April 2003.



Their displacement is 31,500 tons with dimensions 196.5m x 28.25m x 9.97m. They are diesel electric powered, with 4 Wartsila 12V32E/GECLM diesel

generators of 18,760 kW and 2 GEC Alstom electric motors of 14,000 kW giving 18 knots. They also have bow and stern thrusters. They have a range of 10,000 nautical miles at 15 knots. They are armed with two 30mm cannons two Phalanx CIWS and two machine guns. They can carry one Merlin helicopter.



They were designed for “high tempo” fleet operations, combining speed, endurance, aviation facilities and full replenishment at sea capability in modern double hulled hulls built to full naval standards. They can provide fuel, food, fresh water, ammunition and other supplies to Royal Navy vessels around the world.

The Wave Ruler has been laid up in Seaforth Dock, Liverpool since April 2018. The Wave Knight entered extended readiness in Portsmouth in March 2022. The Royal Navy is dispensing with them primarily because of manpower shortages, but they have been superseded by the “Tide” class vessels. Hopefully the proposed arrangement will keep these useful vessels available for several more years.

# THE LOSS OF THE WAKASHIO



On 20<sup>th</sup> July 2020 the Panama flagged capsized bulk carrier WAKASHIO grounded on a coral reef off the southeast of Mauritius. She was sailing in ballast from Lianyungang in China to the Port of Tubarao in Brazil to load iron ore for China. She had bunkered at Singapore for the voyage.



She had been built by the Universal Shipbuilding Corporation in Tsu of Mie Prefecture, Japan, being laid down on 23<sup>rd</sup> September 2004, launched on 9<sup>th</sup> March 2007 and delivered on 30<sup>th</sup> May 2007. She was owned by the Nagasaki Shipping subsidiary Okiyo Maritime Corporation and chartered by Mitsui OSK Lines (MOL).

She was of 203,000 dwt with dimensions 299.95m x 50.0m x 18.35m and had a crew of 20. She was powered by a single-acting two-stroke 6-cylinder engine of

16,860 kW built by Mitsui Engineering & Shipbuilding driving a single screw and giving 14.5 knots. The engine was burning Very Low Sulphur Fuel Oil (VLSFO) at the time of the accident.



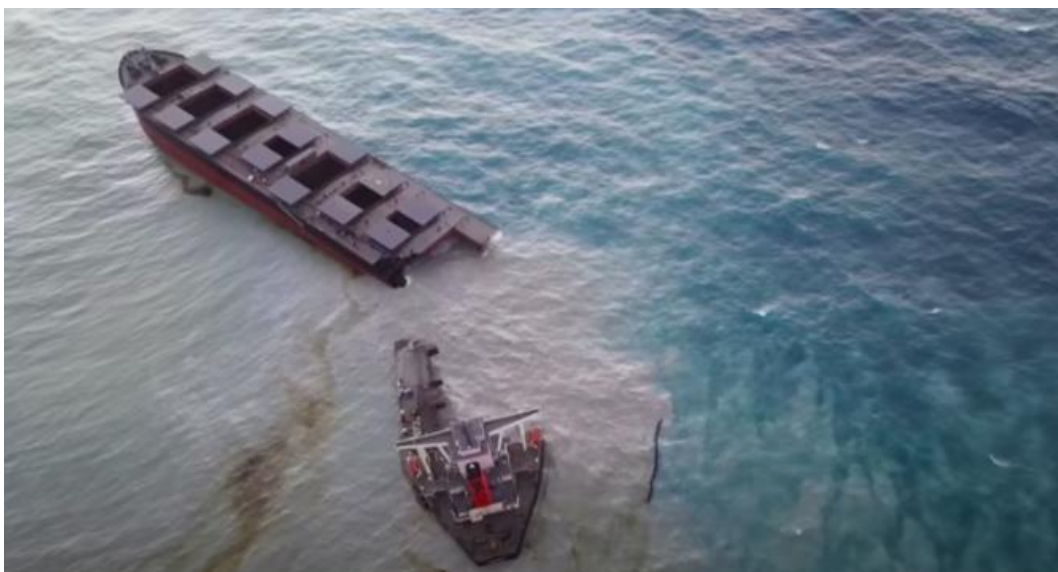
According to the subsequent enquiry, the ship had diverted from its voyage plan to try to get a better mobile phone signal near the Mauritius coast. Her crew had been forced to stay on board longer than normal because of Covid restrictions and were desperate to contact their families.

She grounded near the Pointe d'Esny wildlife sanctuary immediately causing damage to the coral reef. The weather conditions were reasonably good at first, but unfortunately there were no salvage tugs available. After a week, the weather worsened and the ship being light, was buffeted by the seas. Attempts were made by pumping seawater into Holds 2,4 & 8, but cracks in the hull were reported on 5<sup>th</sup> August.



On 7<sup>th</sup> August the Government of Mauritius declared a state of environmental emergency, asking for international help. Some 3000 tons of VLSFO etc were taken off her starting on 11<sup>th</sup> August by Indian Oil Mauritius loading the oil onto the barge TRESTA STAR, but about 1000 tons had escaped causing huge pollution ashore.

She broke in two on 15<sup>th</sup> August, the break in the way of Holds 8 and 9, some 200 metres from the bow. The bow section was towed off the reef by two tugs hired by Smit Salvage, the BOKA EXPEDITION and the BOKA SUMMIT, and after the removal of potential pollutants, it was scuttled in deep water.





The remaining stern section contained the accommodation block, bridge and engine room and it was firmly on the reef. It was decided to break up the section where it lay. On 31<sup>st</sup> August the tug SIR GAETON DUVAL working on the wreck sank in heavy seas after colliding with the barge L'AMI CONSTANT, which it was towing, and three of its crew of eight were killed.

China's Lianyungang DALI Underwater Engineering Co. were assigned to carry out the work onsite using its massive crane barge HONG BANG 6. By late 2021, the team had ripped apart the vessel leaving the 600 ton main engine exposed, sitting on a keel section before it was lifted onto the barge. The last phase, including clearance of debris was completed on 16<sup>th</sup> January 2022. The steel salvaged was dismantled and taken by road to the smelting facility on Mauritius. The crane barge was taken back to China on board the semi-submersible XIN GUANG HUA.

**OTHER SHIPS INVOLVED**



### TRESTA STAR GROUNDED ON REUNION ISLAND

1. TRESTA STAR: She was a Mauritius flagged bunkering tanker built in Goa, India in 2019 and is owned by Tresta Trading of Mauritius. She was of 2900 dwt with dimensions 74.0m x 16.0m x 4.16m. In February 2022 she grounded on Reunion Island and was a total loss.



### FAIRMOUNT EXPEDITION

2. BOKA EXPEDITION: She is a Malta flagged salvage tug built in Japan in 2007 as the FAIRMOUNT EXPEDITION. She is of 3239 gt with dimensions 75.0m x 18.0m. She is powered by a Wartsila 6L32 engine of 12,800 kW. She is operated by Boskalis Offshore Long Distance.



BOKA SUMMIT

3. BOKA SUMMIT: She is a Malta flagged salvage tug built in Japan in 2005 as the FAIRMOUNT SUMMIT. Her details are as the Boka Expedition.



SIR GAETAN DUVAL

4. SIR GAETAN DUVAL: She was a Mauritius flagged harbour tug owned by the Mauritius Port Authority. She was built in 1993 and is of 275 gt. with a bollard pull of 30 tons.



L'AMI CONSTANT

5. L'AMI CONSTANT: She was built as a bunkering tanker in 1971 by the Taylor Smith Group of Mauritius. She was of 552 dwt with dimensions 41.66m x 9.35m. She was in 2012 cut in two and her forward part was used as the floating pontoon used during the salvage of the Wakashio.

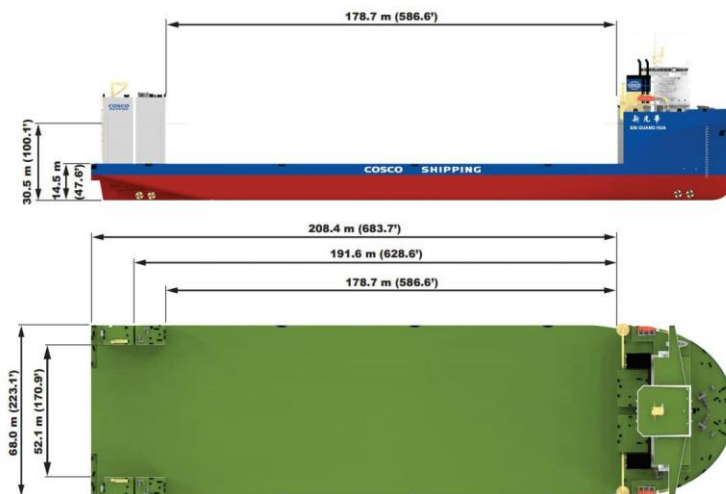


HONG BANG 6

6. HONG BANG 6: She is a Chinese registered non-propelled crane barge operated by Dali Salvage. Her dimensions are 100m x 33m and she carries a fully rotating 2000-ton crane.

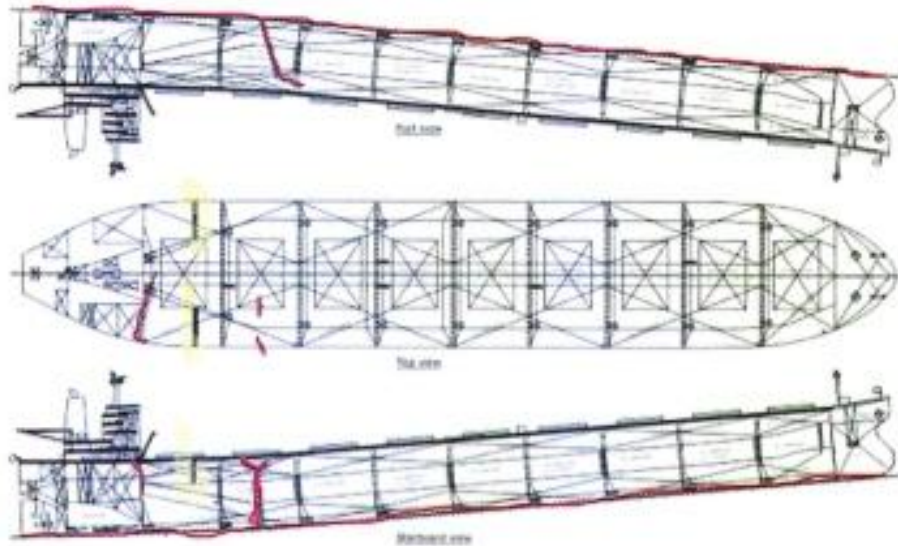


XIN GUANG HUA



XIN QUANG HUA

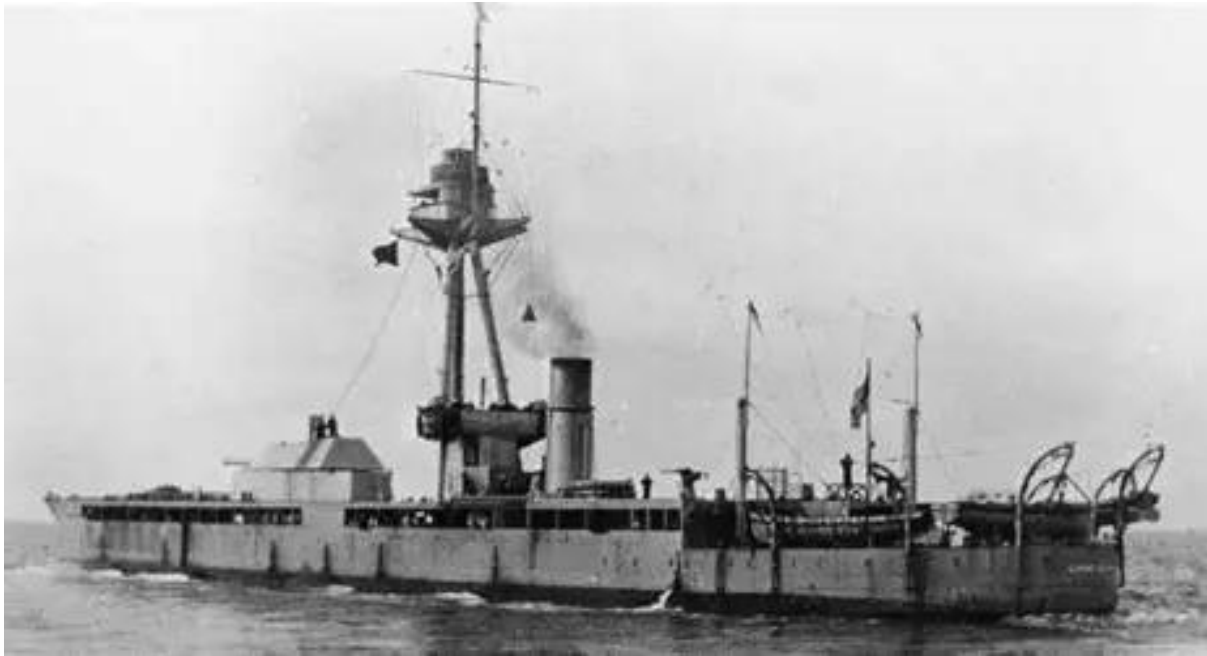
- XIN GUANG HUA: She is a Chinese flagged semi-submersible delivered to her operators Cosco Shipping in December 2016. She is of 98370 dwt with dimensions 255m x 68m x 10m. She is diesel-electric powered with 6 diesel powered generators of 4750 kW each driving 2 screws and 4 thrusters giving a service speed of 13.5 knots. She can be submerged to a depth of 16 m.



CRACKING

MARKED IN RED

## HMS LORD CLIVE AND HMS TERROR



HMS LORD CLIVE

During WW1, the Royal Navy developed several classes of ships termed as “Monitors” designed to give close support to troops ashore by bombardment. To do this, they had to have shallow draught and carry a heavy armament which resulted in slow and unseaworthy ships. The first type of monitors, the Marshall Ney class proved quickly to be a dismal failure. The navy, however, persevered with the type with ships of various sizes, and even built a further

two in WW2. HMS Erebus and HMS Terror, despite still having their limitations, were the most effective of the Royal Navy monitors in the First World War



#### LORD CLIVE AFTER 18" GUN ADDED

HMS LORD CLIVE was the lead ship in the Lord Clive class of eight monitors. She was built by Harland & Wolff in Belfast, being laid down on 9<sup>th</sup> January 1915, launched on 10<sup>th</sup> June 1915 and completed on 10<sup>th</sup> July 1915. She was of 5850 tons displacement with dimensions 335' 6" x 87' 2" x 9' 11". She had two coal-fired water-tube boilers providing steam for her twin 4-cylinder vertical triple expansion steam engines of 2310 hp driving 2 screws and giving the magnificent top speed of about 7 knots. She had a range of 1100 nautical miles at 6.5 knots.



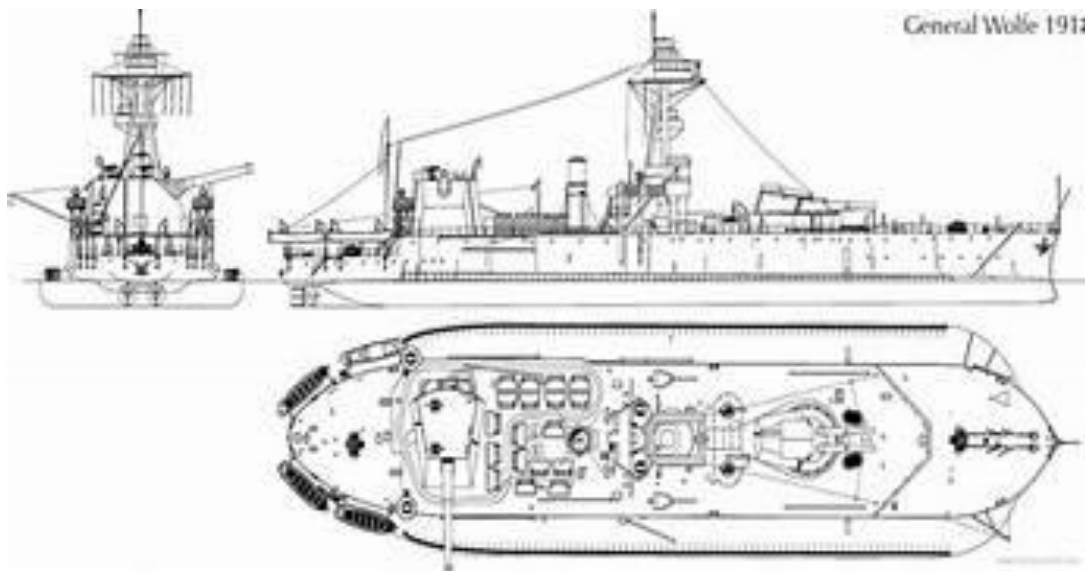
LORD CLIVE

### SHOWING THE !\*2 GUN

She was armed with two 12" guns in a hydraulically powered turret forward, two 12 pounders, one 3 pounder and one 2 pounder guns. The 12" guns had come from the Majestic class pre-Dreadnought battleship MAGNIFICENT, although the turret had been modified to give a maximum elevation of 30 degrees, up from 13.5 degrees. Protection was 6" thick sloping waterline Krupp cemented armour for the belt and bulkheads, 10.5" for the turret face, 5.5" for the turret sides, 8" for the barbette, 6" for the conning tower and 1" to 2" for the deck. She also had anti-torpedo bulges 15' deep.

During WW1 she mainly served in the Dover Patrol, bombarding installation on the coast of German occupied Belgium and France, sometimes with her sisters, SIR JOHN MOOR, PRINCE RUPERT and GENERAL CRAWFORD, but with little to show for it.

Between 5<sup>th</sup> December 1917 and 6<sup>th</sup> April 1918, she was modified to mount a spare 18" gun previously fitted on HMS FURIOUS. The installation of the gun was delayed until October 1918. The gun was set in a huge gun shield fixed to fire over the starboard side. It had a traverse of 10 degrees either side of its centreline and could fire between 22 and 45 degrees of elevation. Her draught aft was increased to 13' 2" and her displacement to 6850 tons. Ship's complement was increased from 194 to 278, and she could carry sixty 18" shells. Her rate of fire turned out to be one round every 3 to 4 minutes. The only time the 18" guns were fired in anger was on 14<sup>th</sup> October 1918 when she fired 4 rounds at a bridge at Snaeskerke.



HMS

### GENERAL WOLFE LORD CLIVE CLASS

She was paid off immediately after the end of the war and laid up in Immingham. She was towed to Portsmouth in September 1920 for trials with a triple 15" gun turret. For this purpose, the 15" turret and her secondary guns were removed. The trials were carried out at the Shoebury Range on 1<sup>st</sup> February 1921, after which she returned to Portsmouth. She was sold for scrapping on 10<sup>th</sup> October 1927.

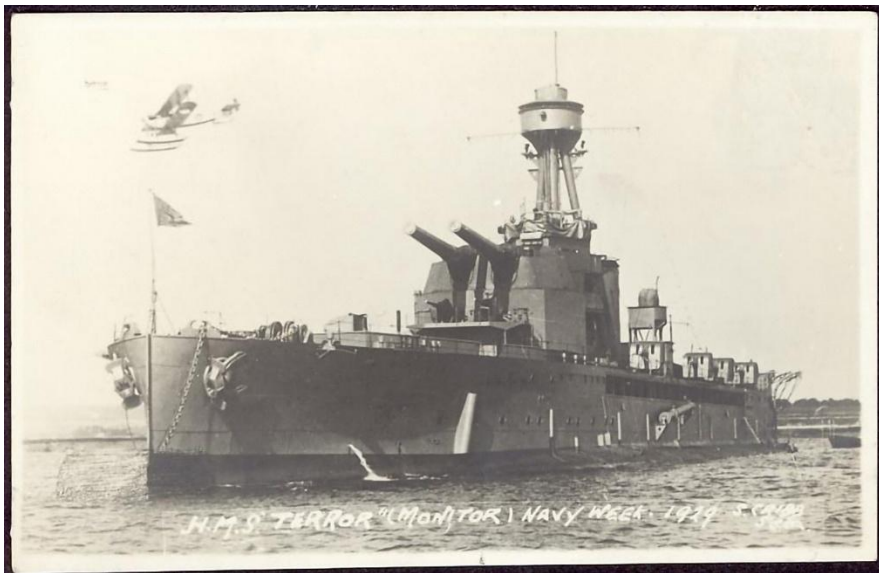


HMS TERROR

HMS TERROR was a monitor of the Erebus class, designed in the light of lessons learnt from the first types of monitors. She was built by Harland & Wolff in Belfast, being laid down on 26<sup>th</sup> October 1915, launched on 18<sup>th</sup> May 1916 and completed on 6<sup>th</sup> August 1916. She was of 8450 tons displacement with

dimensions 405' 0" (oa) x 88' 2" x 11' 8". She had 4 oil-fired Babcock & Wilcox water-tube boilers providing steam for her two vertical triple expansion steam engines of 600 ihp driving 2 screws and giving 13 knots. She could carry 750 tons of fuel oil giving a range of 2480 nautical miles at economical speed.

She was armed with two 15" guns in a single turret forward, reused from the Marshall Ney, but modified to give an elevation of up to 30 degrees. She also carried one 3" and two 12 pounders. Armour protection consisted of: deck 1" to 4", bulkheads 4", barbettes 8", turret 5" to 13" and conning tower 6".



HMS TERROR IN

1929

From commissioning to the end of the war, Terror was a member of the Dover Patrol, periodically bombarding the occupied coast of Belgium. On 5<sup>th</sup> June 1917 with the Erebus, Terror bombarded Ostende, damaging several ships and dockyard installations. The squadron returned on 22<sup>nd</sup> September and severely damaged the dockyard and floating docks. On 19<sup>th</sup> October, in an action with 3 German Coastal Torpedo Boats off Dunkirk, Terror was hit by three torpedoes, badly damaging her bow. After beaching locally for temporary repairs, she was towed to Portsmouth for permanent repair work where an extra two 6" and a pair of 2 pounders were installed.

On 22<sup>nd</sup> March 1918 she bombarded Ostende Harbour firing 39 shells before a German smoke screen obscured the target area. In April she participated in the Zeebrugge Raid. That summer, her 6" guns were removed and replaced with eight 4" guns. On 27<sup>th</sup> September 1918, after her worn out 15" guns had been

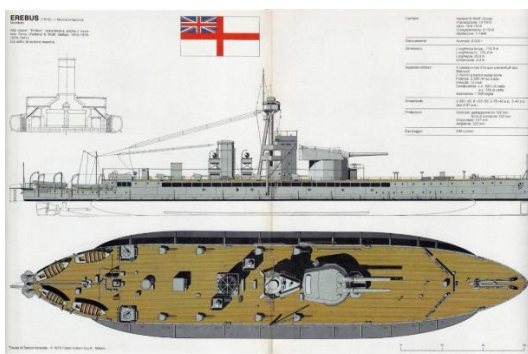
replaced, she and the Erebus provided gunnery support at the Fifth Battle of Ypres.



HMS EREBUS

After the war, she was attached to HMS EXCELLENT, the Royal Navy gunnery school in Portsmouth. In January 1934 she became the base ship at Sembawang Naval Base in Singapore. Between May and December 1939, she had an extensive refit in Singapore but was ordered home in January 1940. In March 1940 she served in the Mediterranean, contributing to the air defences of Malta before supporting the land-based assault of Italian positions in North Africa at the end of 1940.

In January 1941 she helped capture Bardia and Tobruk and then tried to defend Benghazi from German air attacks in that February. On 23<sup>th</sup> February, damage by some Ju 88s bombing near misses which opened up her old hull steelwork, she began to sink by the stern. An attempt was made to tow her into Benghazi, but she sank in the early hours of 24<sup>th</sup> February off the coast of Libya. All her crew were taken off by the minesweeper HMS FAREHAM and the corvette HMS SALVIA.



# ALGOSOLIS



A brief caller at Number 2 Jetty of the Oikos Storage terminal on Canvey on 8<sup>th</sup> March was the Canadian flagged oil tanker ALGOSOLIS. She had departed from Montreal on 24<sup>th</sup> January and called at Rotterdam, Gothenborg, Ijmuiden and Rotterdam again before berthing on Canvey. She departed on the morning of the 10<sup>th</sup> March, lost in the murk as she passed our flat. She was bound for Antwerp. I cannot recall a Canadian oil tanker calling here before, and with the situation in the USA, it is probably a sign of the times.

She was built by the CSSCC Jiangnan Shipyard (Group) Co. Ltd. of Shanghai as the ELI KNUTSEN for Knutsen Shipping of Haugesund, Norway. She was laid down on 10<sup>th</sup> July 2008, launched on 4<sup>th</sup> November 2008 and commissioned on 15<sup>th</sup> June 2009.



ELI KNUTSEN

She is of 16,544 dwt with dimensions 144.1m x 23.2m x 8.9m. She is powered by a single 6-cylinder MAN-B&W 2-stroke medium speed 6L48/60B diesel of 6300 kW giving 15.5 knots. She has been owned and managed since July 2024 by Algona Tankers Ltd. of St. Catharines, Ontario, Canada.

## **USNS COMFORT and USNS MERCY**



COMFORT

In the news recently were the two US hospital ships COMFORT and MERCY. Mr Trump threatened to immediately send one to Greenland although both were in a shipyard in Mobile, Alabama for maintenance. Apart from readiness problems, they are not ice strengthened and Greenland ports are too shallow for the deep draught of the two vessels.

As of 10th March 2026, The Comfort is at Mobile, Alabama in the middle of a maintenance programme. The Mercy has been through the Panama Canal and is heading northwards in the eastern Pacific, possibly towards a shipyard in Portland, Oregon. Departure for either to Greenland in the immediate future, therefore, seems unlikely.



COMFORT

THE USNS COMFORT: She was built by the National Steel & Shipbuilding Company at San Diego for the Northwest Shipping Corporation of New York as the San Clemente class oil tanker SS ROSE CITY. The 13 ships of the San Clemente class were built to carry crude oil from the Trans-Alaska Pipeline System. The Comfort was laid down on 1<sup>st</sup> May 1975 and launched on 1<sup>st</sup> February 1976. After conversion into a Hospital Ship by her original builders, starting in 1984, she was delivered to the US Navy's Military Sealift Command on 1<sup>st</sup> December 1987.



## ROSE CITY

As built, she was of 45,480 sdwt with dimensions 272.2m x 32.2m x 9.7m. Her two Foster Wheeler boilers provided steam for her two General Electric cross-compound geared steam turbines of 18,300 kW driving two fixed pitch propellers and giving 17.5 knots. As converted, she provides 100 patient beds and 12 operating rooms and has a flight deck for military helicopters. She has a double bottom and bacteria-enzyme sewage treatment plant and high-capacity clean ballast systems.

She was involved in the 1990/91 Gulf War and in the 2002/03 Iraq War but she has been of greater use after several natural disasters.



MERCY

THE USNS MERCY: She was also built by the National Steel & Shipbuilding Company in San Diego for the Northwest Shipping Corporation of New York as the San Clemente class oil tanker SS WORTH. She was laid down on 12<sup>th</sup> June 1974, launched on 1<sup>st</sup> July 1975 and delivered in 1976. After conversion into a hospital ship by her builders, she was delivered to the US Navy's Military Sealift Command on 8<sup>th</sup> November 1986. Tonnage, dimensions and machinery are the same as for the Comfort. She was also deployed during the 1990/91 Gulf War as well as assisting after various natural disasters.



Being conversions, the two vessels were not ideally suited for military hospital ships. The original full-height transverse bulkheads remained virtually unbroken, and their size made them too large for many ports as well as large potential targets. Their machinery was expensive to operate and maintain. They have generally been under-utilized, and the US government has deployed them as symbolic humanitarian missions overseas. They have often been denounced as expensive public relations exercises.





Shipbuilding and Engineering Company at Govan for the Canadian Pacific Railway, being launched on 6<sup>th</sup> July 1907 with her Maiden Voyage starting on 14<sup>th</sup> September 1907.



She arrived at the end of the voyage at the Davie Shipyard at Levis, Quebec on 5<sup>th</sup> October 1907. At the shipyard, she was carefully cut into two halves because the Welland Canal locks were too short to handle her in one piece. Until 1935, the maximum length of ship that could be handled was 270 feet.



## MOVING TO KINGSTON

She was re-assembled at Buffalo, New York and then resumed her delivery voyage under her own power on 19<sup>th</sup> December 1907, and she began service from Owen Sound, Ontario on 7<sup>th</sup> October 1908. She with her various sisters were to link Canadian Pacific Railways' depots at Owen Sound on Lake Ontario and Fort William and Port Arthur on Lake Superior, a 2.5-day voyage in each

direction. The train and steamer service carried on until 1965 when the Trans Canada Highway through northern Ontario was completed.



## ENGINE ROOM

The Keewatin was quite small, even by the passenger ship sizes common in 1907. She was of 3856 grt, with dimensions 336' 7" x 43' 8" x 23' 7". Her 4 coal-fired scotch boilers provided steam for her quadruple expansion engine of 3000 indicated horsepower built by Fairfields giving a maximum speed of 16 knots. She was, in addition to her steam engine propulsion, schooner rigged. She had 108 staterooms and capacity for 288 passengers with a crew of 86.

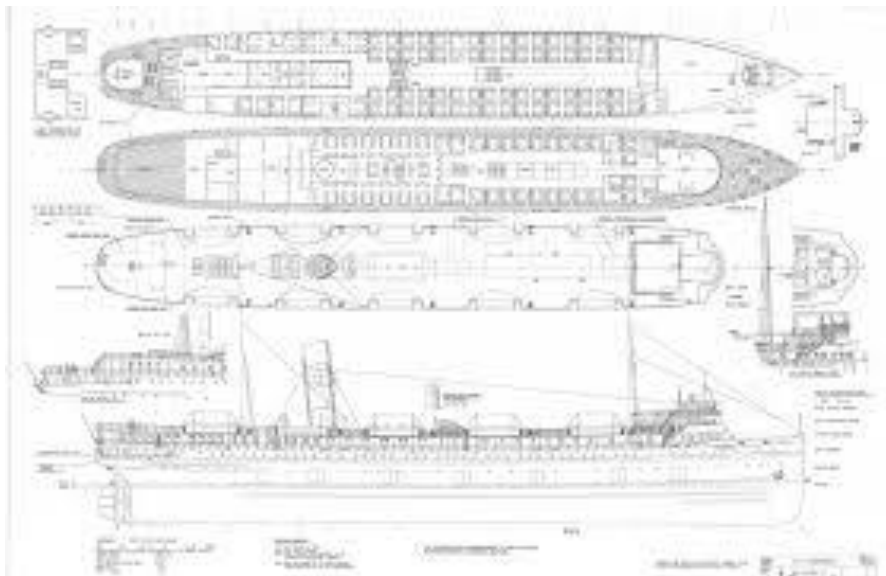
She operated as an emigrant ship on Canada's Great Lakes until 1920. She was then converted into a cruise ship, carrying as well as passengers, 1600 tons of bagged grain and cereals on downward trips.



In September 1949 the Great Lakes passenger steamer SS NORONIC was destroyed by fire in Toronto Harbour with the loss of at least 118 lives. In the light of this disaster, the Keewadin was retrofitted with sprinklers and had fire bulkheads added and her original wooden masts were replaced in steel.

Her last passenger run was on 29<sup>th</sup> November 1965 and a freight only service only lasted for 1966, as on 8<sup>th</sup> November 1966 she was sold for scrapping. In January 1967 she was bought by R.J. Peterson Senior, who brought her to Kalamazoo River in Douglas, Michigan where she became the Saugatuck Maritime Museum museum.

In 2011 she was sold to Skyline International Development Inc. and after a considerable amount of dredging, she was towed to Port McNicoll, Ontario. In 2020 she was donated to the Great Lakes Museum in Kingston, Ontario. As a museum, she still has the original 4 Scotch boilers with 12 hand-stoked coal furnaces and the quadruple expansion steam engine, steering gear and windlass etc. She is the last surviving Edwardian passenger liner.



# SNOEKGRACHT



The Dutch flagged dry bulker SNOEKGRACHT berthed on the Main Berth at Tower Wharf, Northfleet on 17<sup>th</sup> March, probably with a cargo of forest products to unload. She had voyaged from Puerto Cortez in Honduras, via Antwerp. She departed on 22<sup>nd</sup> March for Gdynia, Poland.



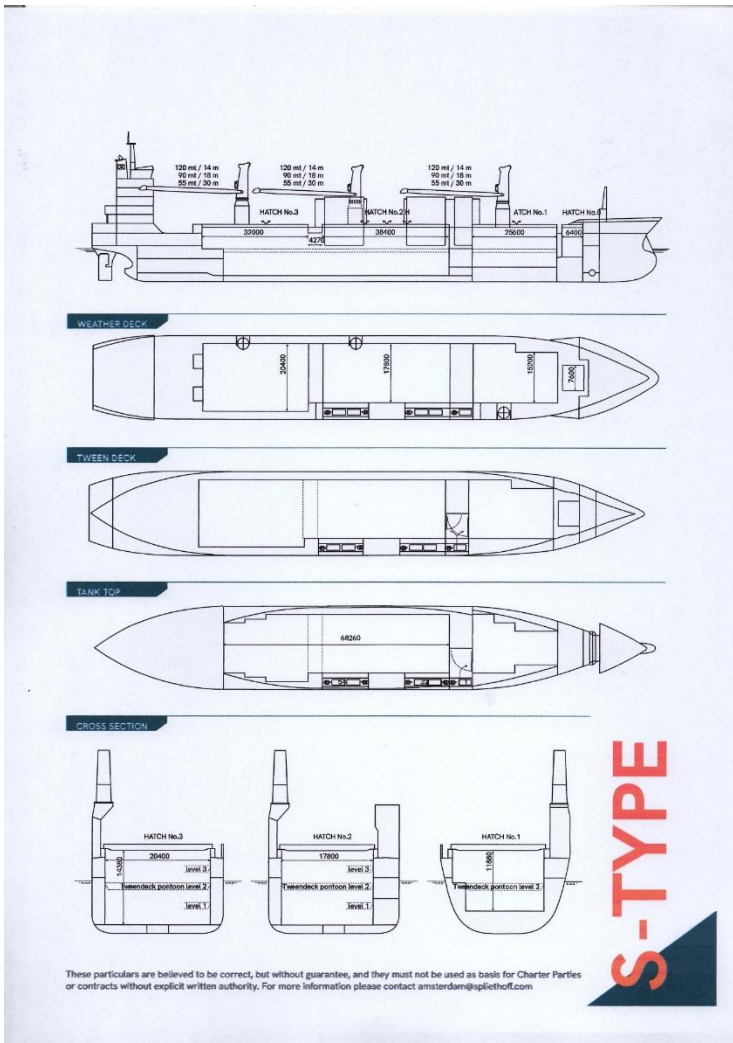
She is one of eleven Spielthoff's S-Type heavy-lift/multipurpose ships and was built by Mitsubishi Heavy Industries at Kobe. She was launched on 12<sup>th</sup> January

2000 as the 3NKEKGRACHT and completed in March 2000. She is of 21,400 dwt with dimensions 168.21m x 25.2m x 10.74m. She is of Ice class 1A and has three 120-ton cranes plus five 16-ton side loaders. Her decks are strengthened for heavy loads, with the weatherdeck hatch covers rated at 2.0 t per square metre, the tweendeck hatch covers rated at 7.5 t to 5.0 t per square metre and the tank top 20.0 t per square metre.

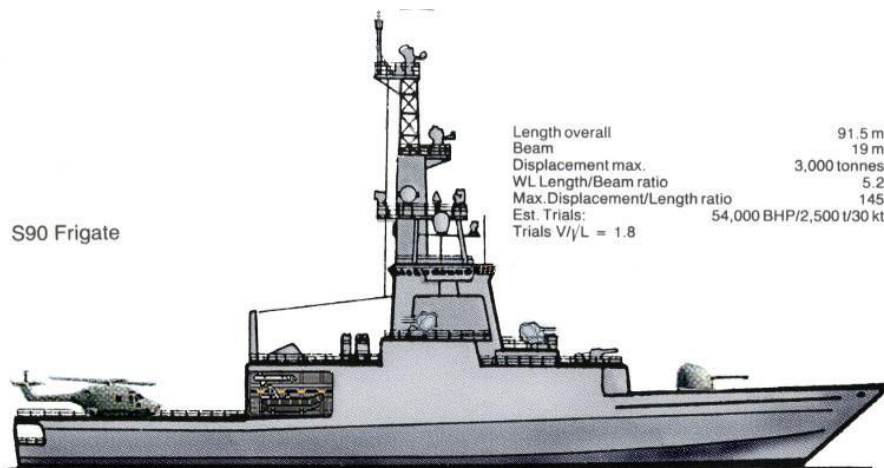


She is powered by a 4-stroke 6-cylinder in-line Wartsila 6L64 diesel of 12,060 kW at 333 rpm driving a single screw giving 19.7 knots. The engine was built by Fincantieri.

She is owned and managed by Spliethoff's Bevrachtingskantoor BV of Amsterdam. A useful vessel, but getting a bit long in the tooth for modern emission requirements etc.



# THE “SHORT FAT SHIPS” CONTROVERSY

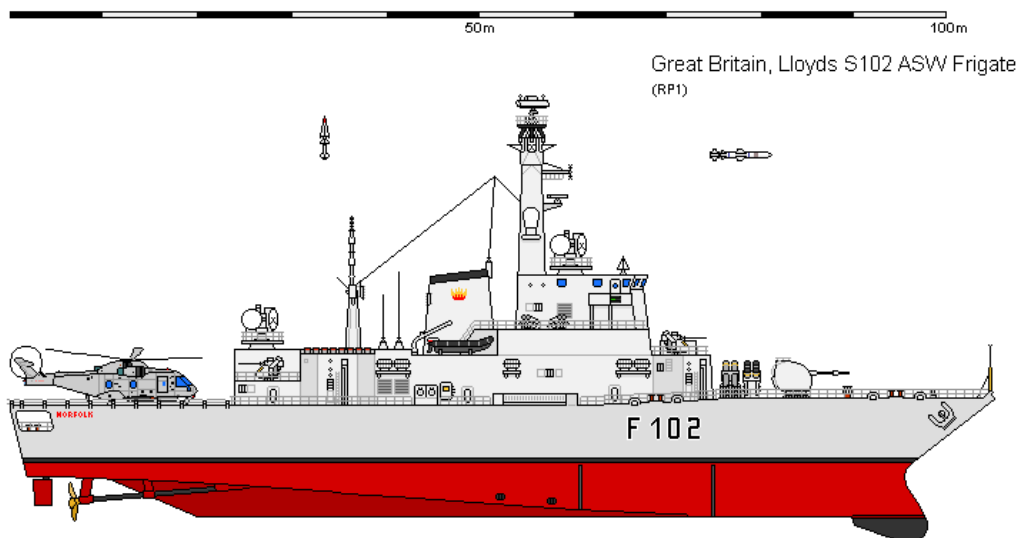


In the early 1980s an alternative hull design was put forward for the next class of Royal Navy frigates. The protagonists, Thornycroft, Giles Associates Ltd, asserted that a shorter and wider hull form would have many advantages over the conventional long and thin types, both in terms of efficiency and cost effectiveness. The concept was pitched in May 1982 and it gained traction in the post-Falklands budget pressures.

The S-90 design concept, also known as the Sirius design, had a broader beam relative to its length giving greater internal volume, improved stability and simpler, hence potentially cheaper construction than a conventional frigate, such as the Leander class. It was claimed that when planing, speeds of up to 50 to 60 knots could be achieved, with cost savings of up to 25%.



The Admiralty carried out extensive tank trials with the S-90 against the Leander class and in almost all respects the conventional hull was superior. An independent technical review was undertaken by Lloyds Register comparing the slightly modified S-90 design to the proposed Type 23 class. For this exercise, a full load displacement of 4200 tons, similar to that of the Type 23 was used and a similar weapons package.



S90

### AS TWEAKED BY LLOYDS

It was found that the seakeeping of the S-90 did not match that of the Type 23, and that it was inferior in terms of speed, endurance and quietness. Quietness





Thornycroft, Giles Associates continued to dispute the findings of the Lloyds Register report and set up shop in the USA. Some years later, their short fat boat concept came to fruition in the Freedom class Littoral Combat Ship, but that too has become somewhat controversial.

#### COMPARISON OF DESIGNS MENTIONED

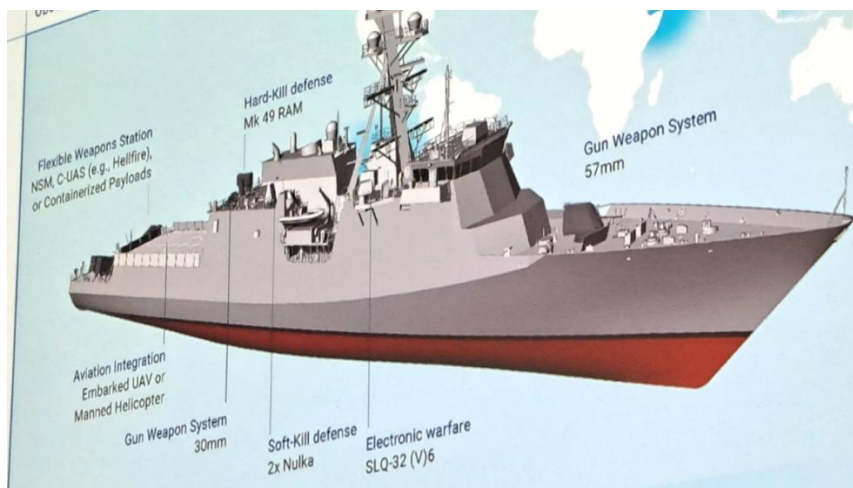
FEATURE	S90	LEANDER	DUKE	FREEDOM
Displacement (T)	4200	3500	4900	3500
O.A.Length (M)	91.5	113.4	133.0	115
Beam (M)	19.0	12.5	16.1	17.6
Max. Speed (KTS)	30	29	28	47
Power (KW)	39,720	22,370	25,500	84,000

## THE FF(X) PROGRAMME

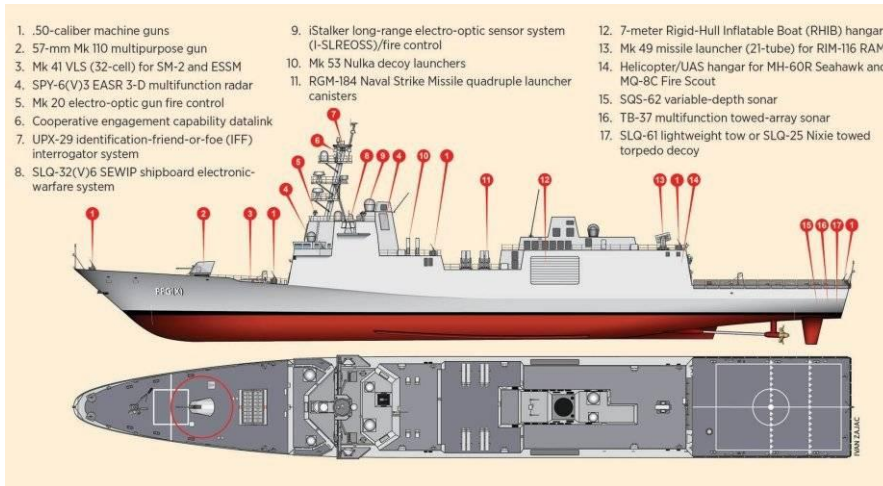


After huge delays and cost overruns on the CONSTELLATION frigate programme, the USA decided to cut their losses on the Constellation class in late 2025. They cancelled 4 ships and continued with just 2. Instead the USN adopted a proven US hull form – The US Coast Guard’s LEGEND class National Security Cutter.

The design choice was optimised for “persistent presence, maritime security and lower-risk escort duties”. The emphasis is on adaptability rather than raw firepower, as well as cheapness. The ships, with 50 to 65 planned, will be designed and built by Huntington Ingalls Industries at Pascagoula, Mississippi, who built the 10 Legend class for the Coast Guard. The timescale is tight, with the first vessel being launched by 2028.



The preliminary specifications, largely based on the Legend class, are for a steel hull and superstructure and a full load displacement of about 4750 tons with dimensions 128m x 16m x 6.7m, and a complement of 148. Propulsion is Combined Diesel And Gas (CODAG) with a Rolls-Royce MT30 gas turbine for when high speed is required and four MTU 4000 M53B diesel generators powering an electric propulsion motor which drives 2 controllable pitch propellers giving a top speed of 28 knots and a range of 12000 nautical miles at cruising speed.



The first batch of ships will carry a Bae Systems Mk 110 57mm gun, a 30mm backup gun, and a 21 cell Mk49 RIM-116 Rolling Airframe Missile Launcher (for point defence). They also will have a payload space aft capable of carrying up to 16 Naval Strike Missile Launchers (anti-ship missiles) or 48 Hellfire missiles. They will be equipped to support helicopter operations, but will not have a hangar. There appears to be no provision for either a hull-mounted or towed array sonar. The concept is very much to go for quantity rather than quality with these ships.

NOTE: Information so far on the FF(X) is limited and sometimes contradictory, hence the comments on helicopter operations and ASW may be wrong.

## ONE FACT WONDER

### Underwater chariots

### NEGER ATTACKS ON THE D-DAY LANDINGS



THE NEGER HUMAN TORPEDO

The Neger (Negro) was the first German human torpedo. It had a crew of one and could not submerge, but as it travelled awash, it was difficult to spot during night operations. The type was active from March 1944 and around 200 were built. About 80% of its crews were killed in action or in accidents.

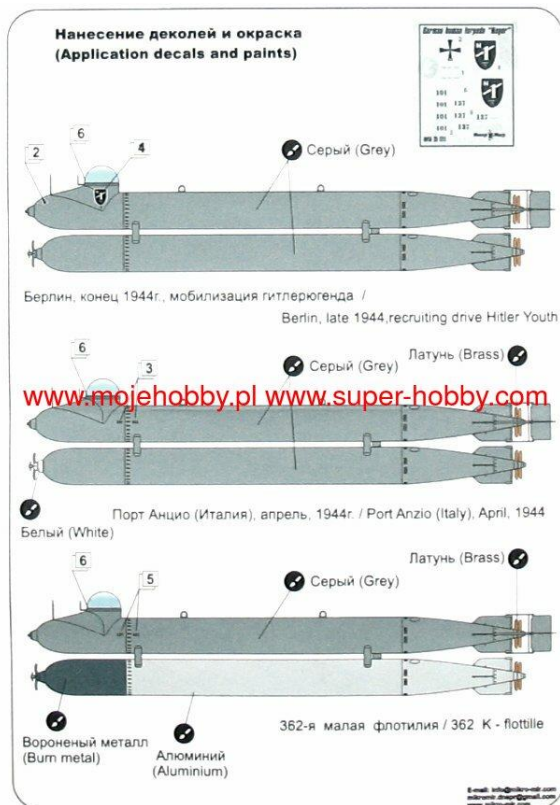


It was based on the German G7e standard torpedo, with the warhead replaced and a cockpit formed covered by a Perspex dome. It would run awash with a second G7e torpedo slung underneath. When near its target, the lower torpedo would be released, and the Neger would depart ASAP.



The Neger had a displacement of 2.7 tons with dimensions 7.6m x 533mm. It was powered with an AEG – AV76 Eto 8.8 kW electric motor using 5 banks of

batteries which gave 3.2 to 4.2 knots and a range of 48 nautical miles at 4 knots.



## THE NORMANDY ATTACKS

There were two attacks on the Normandy invasion fleet by Neger vessels. 40 of the Negers operated from the Favrol Woods on the south bank of the Seine, near Harfleur.

On the night of 5/6 July 1944, 24 Negers attacked, sinking two minesweepers (HMS MAGIC and HMS CATO), 9 returning from the mission.

On the night of 7/8 July 1944, 21 Negers attacked but were spotted and attacked by aircraft and ships. The minesweeper HMS PYLADES was sunk, and the Polish cruiser ORP DRAGON (ex HMS DRAGON) was severely damaged and had to be beached. It was later scuttled to reinforce the breakwater to Mulberry B.

On 20 July 1944 the destroyer HMS ISIS was sunk whilst at anchor in Seine Bay and it was considered that her loss was due to Neger action.



2024

On 30<sup>th</sup> October 2024, the remains of a Neger were uncovered on a beach in Calvados, Normandy.



EXHIBIT AT NMM

THE ALLIED VESSELS SUNK



CATHERINE

### CLASS MINESWEEPER

HMS MAGIC, HMS CATO and HMS PYLADES: These were all Catherine class fleet minesweepers built in the USA as the AWK class and transferred under the Lend Lease Agreement. They were of steel, of 890 tons displacement and diesel-electric propulsion of 2600 kW driving 2 screws giving 18.1 knots. They were armed with a 3" gun, 2 x 40mm and several 20mm guns.



HMS DRAGON

ORP DRAGON: She was a Danae class light cruiser launched by the Scotts Shipbuilding and Engineering Company of Greenock in December 1917 as HMS DRAGON. She was of 4276 tons displacement and powered by geared steam turbines of 30,000 kW giving 29 knots. At the time of the D-Day landings her

armament was 5 x 6" guns, 2 x 4" guns, 8 x 40mm, 3 quadruple 2 pounders and 12 x 20mm. On 15<sup>th</sup> January 1943 she was commissioned as the Polish ORP DRAGON.



HMS ISIS

HMS ISIS: She was an I class destroyer built by Yarrow in Glasgow, being launched on 12<sup>th</sup> November 1936. She was of 1370 tons displacement and was powered by geared steam turbines of 25000 kW driving 2 screws and giving 35.5 knots. She was armed with 4 x 4.7" guns, 2 quadruple 0.5" machine guns and 2 quintuple 21" torpedo tubes.

## **Raid on Alexandria (1941)**

The Raid on Alexandria in Egypt was carried out on 19 December 1941 by Royal Italian Navy (Regia Marina) divers of the Decima Flottiglia MAS (Decima Flottiglia Motoscafi Armati Siluranti), who attacked and severely damaged two Royal Navy battleships at their moorings and damaged an oil tanker and a destroyer in Alexandria's harbour using Siluro Lenta Corse (SLC) manned torpedoes (Italian for "slow-running torpedo").

### **The SLC**

The SLC, nicknamed the "maiale" ("pig" in Italian), was a human torpedo used as an underwater assault vehicle by the Italian Regia Marina. Similar in shape to a torpedo, it was adapted to carry two operators, equipped with autonomous underwater breathing apparatus and a limpet mine.

The first two prototypes of the SLC were tested in October 1935, in the San Bartolomeo torpedo workshops of La Spezia. In 1939 the navy department that trained in the use of the SLC was transferred to a secret base by the river Serchio in Tuscany. During repeated training tests, the weapon was perfected and between 1939 and 1943 the Italian navy manufactured more than 50 SLCs.

The first SLCs were 24.0 ft long and equipped with a 1.2-kilowatt (1.6 hp) electric motor. Power was supplied by an accumulator battery. The maximum speed was about 3 knots with a range of approximately 15 nautical miles at a speed of 2.5 knots.

It was equipped with depth and direction rudders, ballast tanks, and instrumentation that included a magnetic compass, a depth gauge, a clock, a voltmeter, two ammeters, and a bubble level for longitudinal trim control.

There were three sections: in the first, rounded in shape to facilitate navigation, the charge (approximately 260 kg of TNT) along with the corresponding detonation devices was housed. This part, called the service head, was detached from the rest of the device and applied under the keel of the ship.

The central part, cylindrical in shape and called the central body, contained the batteries and externally the structures on which the positions for the two operators were located. In the third, truncated conical in shape and called the tail, the motor was housed along with the framework supporting the propellers and rudders.

### **The Alexandria raid**

On 3 December 1941, the Italian submarine Scirè left La Spezia naval base carrying three SLCs inside three cylinders placed on deck. At the island of Leros in the Aegean Sea, the submarine secretly picked up six men of the Decima Flottiglia MAS.

On the night of 18/19 December 1941, 1.3 miles from the commercial eastern harbour of Alexandria, Scirè released the maiali at a depth of 49 ft about 5.8 miles from the naval anchorage. The maiali reached the harbour and entered the naval base when the British opened the boom gate to let in three destroyers. The maiali crews found it comparatively easy to get over the

torpedo nets around the battleships but attaching a charge to the battleship HMS Valiant (30,600 GRT) was difficult and the crew dropped the explosive onto the seabed about 15 ft below the ship. The men planting their bomb 5 ft beneath the keel of the battleship HMS Queen Elizabeth (30,600 GRT) found it much easier and suspended the charge from the bilge keels as planned.

The Italian crew who attacked Valiant had to surface and were discovered holding on to the mooring buoy but gave nothing away when questioned. They were assumed to have already planted a bomb and were detained in a room near the bottom of the ship. At 5:47 a.m. an explosion under the rear of the tanker Sagona (7,554 GRT) did severe damage to the ship and to the destroyer Jervis oiling alongside. At 5:50 a.m. one of the prisoners on Valiant asked to see the captain and told him that the ship was going to blow up and fifteen minutes later there was an explosion under Valiant's fore turrets, holing the lower bilge and blowing a large hole upwards. The two Italian prisoners were unhurt in the explosion.

Four minutes later there was another explosion, this time under Queen Elizabeth, near its boiler rooms. There were eight casualties.

The crews of the other two Italian submarines got ashore and tried to reach the submarine Zaffiro, due to meet them off Rosetta in the Nile Delta but were captured over the next 48 hours.

The result was a disaster for the Royal Navy, resulting in a period of clear Italian naval supremacy in the east-central Mediterranean. Days before the raid, the Royal Navy had suffered the loss of HMS Prince of Wales and HMS Repulse to Japanese bombers and with the attack on Pearl Harbour, the Allies had lost about 38 per cent of their operational battleship strength during December. The raid at Alexandria neutralised the main remaining capital ships of the Mediterranean Fleet at a stroke. Along with transfers to the Eastern Fleet, the only ships left at Alexandria larger than a destroyer were three cruisers. The Italian battle fleet had four battleships operational.

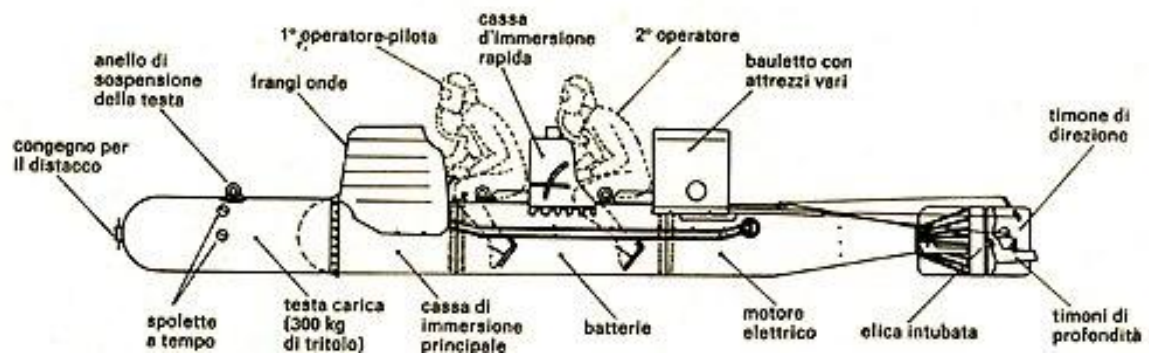
### **The need for ship repairs**

HMS Valiant was moved to a floating dock for temporary repairs. On 3 April 1942 she sailed to Durban in South Africa for permanent repairs from 15 April to 7 July 1942.

HMS Queen Elizabeth was put into a floating dock for temporary repairs and in May 1942 sailed to Port Sudan for repairs to the fuel tanks. It sailed to the Norfolk Naval Shipyard in Virginia USA and underwent permanent repairs from 6 September 1942 to 1 June 1943.

Sagona was towed back to England and repairs took until 1946 to be completed. HMS Jervis required a month in dock for repairs to be completed.

## Siluro Lenta Corsa (Maiale)



Schematics of a Siluro Lenta Corsa

## Motorised Submersible Canoes

MSC Specification: Submersible Canoe

**Length: 12 ft 8 in (3.86 m) (versions vary slightly)**

**Beam: 2 ft 3 in (0.69 m)**

**Displacement: 600 pounds (270 kg)**

**Speed: 4.4kts max, 3.5kts cruise**

**Endurance: 40 nautical miles**

**Maximum Operating depth: 50ft (15m)**

**Personnel: 1 crew. It was possible to carry a second an on the deck and a two-man version was built**



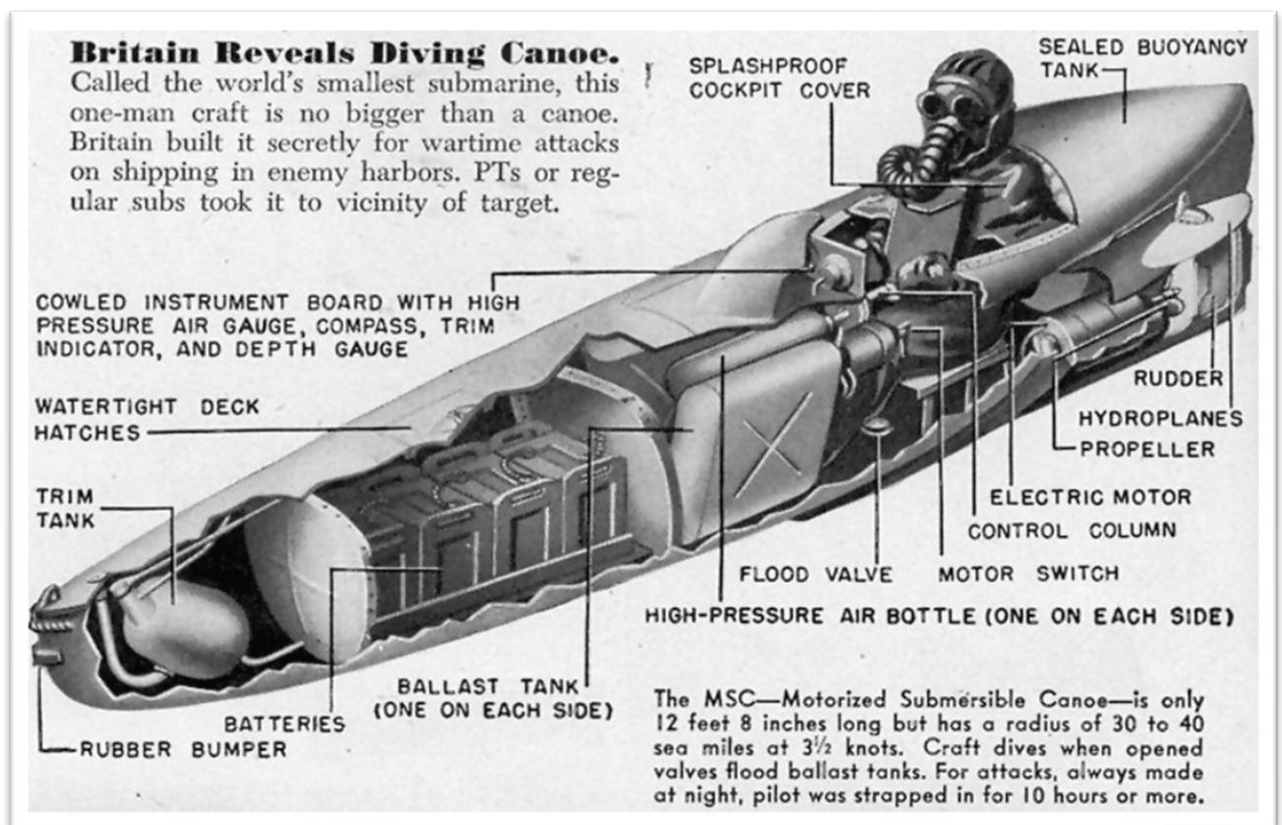
Operational service

**MSCs were also used for Operation Rimau, a raid on Japanese shipping in Singapore in September 1944 by commandos from the joint Australian, British and New Zealand Z Special Unit, sometimes known as "Z Force". After being found by a patrol boat, the canoes had to be scuttled along with the junk in which they were carried. Ten of the attacking force were taken prisoner by the Japanese and subsequently beheaded.**

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A pair of MSCs are believed to have been captured by German forces after an unsuccessful attack on enemy shipping in Måløy by members of the Norwegian Independent Company 1.<sup>[when?]</sup> The divers were landed with their canoes on the nearby island of Gangsøy. However, a local shepherd girl saw them and, thinking that they were thieving Germans, she reported them to the authorities. The divers were then chased across Norway by the Germans until they were picked up safely and taken back to their base in the Shetland Islands.

In the summer of 1944, "Sleeping Beauty Number 72" was delivered to the United States Office of Strategic Services (OSS), the forerunner of the CIA, and became the early prototype for today's Swimmer Delivery Vehicle. It was used from December 1944 to August 1945 to evaluate United States harbour defences, stage mock attacks on capital ships and develop underwater communications equipment.



## Italian Chariots and their activities at Gibraltar



In 1935 two Italian Naval officers developed a two-man underwater chariot or 'human torpedo'. The vessel was 14 feet long and 2.5 feet wide and contained a bank of batteries which supplied an electric motor to run the small propeller at the rear. Two frogmen, equipped with oxygen re-breathers, sat astride the chariot, one as pilot and the other as diver. A ballast tank allowed the vessel to operate at the surface or at shallow depths, and the nose of the chariot was a detachable charge which could be clamped to the hull of an enemy vessel.

The chariot weighed 3,500lbs and had an operational duration of 6 hours and a top speed of 3 knots. Special units were formed to operate these vessels, and they were used to great effect against allied shipping in the Mediterranean.

In Gibraltar, the first attacks were one-way missions by teams of three chariots, dispatched from a mother submarine, the Scire, in the Bay of Gibraltar. The chariots not only attacked shipping moored in the Bay, but were also able to penetrate the anti-submarine defences which protected the harbour. Later attacks were carried out from the vessel Olterra. This Italian

steamer was scuttled on Italy's entry to the war in 1940 but was later salvaged and towed into Algeciras Harbour. Under the guise of extensive repairs, the vessel was converted to an operating base for the chariots. A four-foot square hole was cut into the hull underneath the waterline, and the forepeak partly flooded. Chariots were shipped in bits, ostensibly as boiler spares and were assembled inside. They were sent out to attack Allied shipping, which they did very successfully, then return back to the Olterra.

On Italy's surrender to the Allies in 1943, attempts were made to destroy the evidence of the Olterra's true role, but the neutral Spanish authorities allowed the Royal Navy to tow the vessel to Gibraltar.

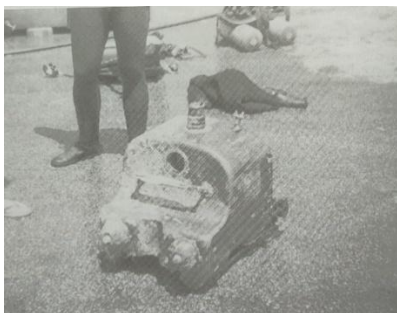
Buster Crabb had arrived in 1942 as a Lieutenant to take up position as mine and disposal officer of Gibraltar,. With this rudimentary set-up Crabb soon became part of the shipping defence strategy of Gibraltar.

He did a number of trials using the Emily, but on his 15th trial it suddenly nose-dived to the bottom out from Detached Mole.

A chariot believed to be Emily was found in 33m by divers around 1975, but unfortunately it was blown to pieces by naval clearance divers in the mistaken impression that it still carried a live warhead.

Unfortunately, the damage from the explosion was so great that all that now remains are a few batteries and bits of wiring. You could easily miss this if you didn't know what to look for. Some bits of the chariot were found and raised by divers during an RAF expedition in 1980..

At least twelve other chariots were abandoned in the Bay by their crews. The sandy slopes of western side of the Bay change frequently due to storm action, etc.,



The ballast tank from the Italian Chariot (Courtesy P. Smith, D. Fa).

## HISTORIC VESSELS BUILT AT WOOLWICH

### PART 2

#### Argo



ARGO was built by Harland & Wolff Woolwich in 1935, and originally as a 72 foot riveted iron composite butty with timber back cabin, and paired with a motor boat used for working the inland waterways. She was a Star Class butty and named after a star configuration. The butty was in various ownership over her years, both in a working capacity and for leisure use. The original elm bottom was replaced with a new timber bottom at some point, however, she fell into a poor condition, as most of these vessels do eventually.

In 2014, she was cut in two and underwent significant steel work rectifications along with a new steel bottom. A new steel aft section was added to the 1/3 forward section to create a 57ft motor boat. A subsequent steel cabin was added over the period of 4 years and the vessel converted for leisure use, fitted out internally. Also fitted with a diesel powered Beta tug engine.

## **Belfast**



BELFAST was built in 1936 for the Grand Union Canal Carrying Company (GUCCCo). The boat was built as part of an order for 24 pairs of rivetted steel narrow boats by Harland and Wolff at North Woolwich on the River Thames and is therefore known as a 'Large Woolwich'. The Large Woolwich boats were part of the GUCCCo 'Town Class', each boat being named after a British city, town, or village. BELFAST was originally paired with butty BAILDON and fitted with a National 2DM engine.

BELFAST remained in the GUCCCo fleet until nationalisation in 1947, passing into the fleet of British Waterways, who replaced the National 2DM engine

with a Petter PD2 in 1959. In 1963, BELFAST was leased to Willow Wren Canal Transport Services, based in Stoke-on-Trent, but by 1970 she was made redundant and laid up in the Wendover Arm, a branch of the Grand Union Canal, as cargo carrying in the canals was coming to an end.

In 1971, BELFAST was purchased by the Dacorum Narrowboat Project and towed to Birmingham, where a wooden cabin was built over the hold. From 1972 onwards, she was hired out to schools, scouts, guides, and other youth groups, first out of Boxmoor, Hertfordshire, and later at Nash Mills in Hemel Hempstead. In 1979, the PD2 engine was replaced with a new Lister ST3, and in the 1990s the wooden conversion and back cabin was replaced in steel.

In 2016, the Dacorum Narrowboat Project closed, and BELFAST was purchased by her current owners the following year. A survey in 2021 found that the steel bottom had reached the end of its life, and in 2022 the bottom plate was completely renewed, with overplating removed, and new steel let in at the footings, around the bows and over some of the knees. The new plating around the bows has been rivetted to the internal angle iron frames and the 1990s steel back cabin, which was the wrong shape, has also been replaced with a replica cabin - her original riveted steel engine room remains to this day. As of August 2023, a National 2DM engine like that fitted originally has been sourced by the current owners to replace the current one.

## **Princess Anne**



PRINCESS ANNE was built by Harland and Wolfe at Woolwich in 1935 as a Star Class Little Woolwich narrow boat. She was originally known as PLATO and was employed working for the Grand Union Canal Carrying Company (GUCCC). She was sold to Proberts in 1941, and was sold again to T&S Elements of Birmingham, for use as a full length tug on the Birmingham Canal Navigations (BCN). She continued in this role until about 1968, when she was sold into private ownership. She was then shortened and converted into a live aboard, although she was subsequently returned to her carrying trim, but with a reduced length of 57 feet 6 inches.

## Stuart and Lloyds Tug Number 2



TUG NO. 2 is a narrow boat built in 1934/5 by Harland & Wolff at Woolwich Shipyard for the Grand Union Canal Carrying Company. The vessel was originally 70 feet in length, was constructed "composite" (riveted iron or steel sides with an Elm bottom) and was named in a "Star Class" as 'ALGOL'.

Sold to Stanton and Staveley Ironworks, Ilkeston, Derbyshire, in June 1940, she was renamed STANTON No 51. Sold to Stewarts & Lloyds Ltd., (Steel Tube manufacturers) Halesowen, West Midlands, in July 1947, they had her shortened and converted to a tug by Harris Dock of Netherton and renamed TUG No 2. The Halesowen tube works was closed by British Steel in September 1980 and the boat was sold into private ownership.

In 1986 a major rebuild of the stern was undertaken at Canal Transport Services, Pelsall, using traditional hot riveting techniques. At that time the elm bottom was replaced, but the timber must not have been good quality, for it failed in fourteen years and the then owner had the elm bottom replaced with steel at Davis Shipyard, Saul Junction, Gloucestershire. She has had two owners since then. 2017 the cabin has oak frames topside and oak gunwales. The hull sides are exactly as original. Her current engine is a 'National Gas & Oil Engine', model DM2 (which would be identical to the engine fitted in 1935). She is now a leisure craft and currently carries the Stewarts and Lloyds livery on the cabin sides.

## **Water Ouzel**



Built in 1935 by Harland & Wolff of Woolwich, WATER OUZEL is a narrow boat converted for passenger use in 1955. She has a capacity for 50 passengers. Her

former name was SUN and she was part of a cargo carrying fleet. After conversion for passenger use, she was first used as a Zoo Waterbus on the Regent's Canal in London and then sold in 1964 to the Midlands, where she operated passenger services at Rugby and Braunston

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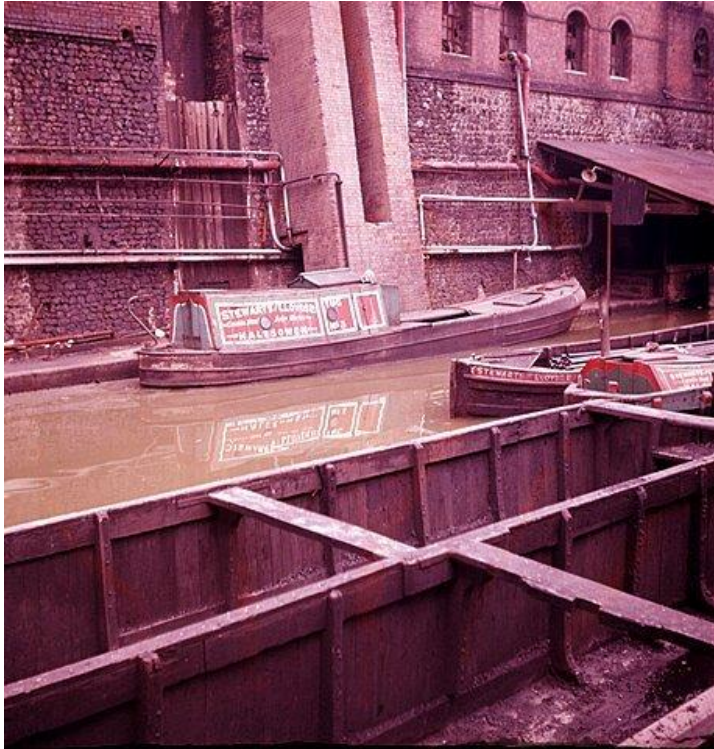
## Cassiopeia



Built in 1935 by Harland & Wolff at Woolwich for the Grand Union Canal Carrying Company, CASSIOPEIA is a narrow boat with an iron composite hull and a 20 bhp diesel engine by Petter. She is one of 24 iron composite pairs and her class is Small Woolwich Star. On her first registration under the Canal Boat Act of 1877 she was designated to house 2 persons or 2 adults and 2 children under 12 years. She remained with the GUCCC until the British Transport Commission took control in 1947. They re-engined her with her present engine in 1958. During the years 1944 to 1963, she remained in the hands of one

family. Thereafter, she passed into private ownership but continued to carry cargoes. She is now based at Ashby Canal, Leicestershire.

## Vesta



Built in 1935 by Harland & Wolff at Woolwich for the Grand Union Canal Carrying Co.Limited, VESTA is a narrowboat with iron sides and a steel bottom which replaced the original elm. Her current engine is an inboard diesel made by National Diesel in 1935. She was sold by GUCCC to Stanton & Staveley Ironworks at Ilkeston in 1942; then sold to Stuarts & Lloyds at Coombeswood Tube Works at Halesown in 1947. She was afterwards taken to Harris at Netherburn and shortened to tug length and used to tow dayboats in and around Birmingham. Name changes have followed changes in ownership and include VESTA NO.96, STANTON 61 and TUG NO.3.

Update, May 2024: Vessel believed to be under new ownership.

## Themis



THEMIS was built by Harland & Wolff in Woolwich, London, in 1935 and became part of the GUCCC between London and Birmingham. She then became a water bus known as *Water Kelpie*, before being sold into private ownership and converted to a live-aboard.

## ANSWERS TO QUIZ 102

### WSS quiz answers – April 2026

1. HMS Dragon has recently been sent to the Middle East to help defend British interests in the area. What type of vessel is HMS Dragon?

*Type-45 destroyer*

2. Where will you find the ship's bell from HMS Lutine which sank in 1799?

*At Lloyd's of London – the bell is traditionally rung to announce a shipping loss*

3. Which German port, a major hub for containers, cars and cruise ships, is located at the mouth of the river Weser on the North Sea?

*Bremerhaven*

4. The UK's Marine Accident Investigation Branch recently issued its report on a 2023 incident aboard which cruise ship? 115 passengers were

injured, including one who later died, as the vessel lost propulsion during a violent storm in the Bay of Biscay.

### *Saga's Spirit of Discovery*

5. What does the abbreviation "LCL" mean in relation to ocean shipping?

*Less-than-Container Load – it allows multiple shippers to share space in a single container, paying only for the space used, measured in cubic metres (CBM). The alternative is FCL – full-container load*

6. The UK is building 5 new Inspiration Class frigates. Alongside new type-26 frigates, they will replace the existing type-23 frigates. What type number will these Inspiration Class frigates have?

### *Type-31*

7. The obsolete destroyer HMS Campbeltown was used in a raid on which port in German-occupied France in March 1942?

### *St Nazaire*

8. Which shipping line's logo is a white, seven-pointed star on a pale blue background.

### *Maersk*

9. Which Scottish port has the registration OB?

### *Oban*

10. Why was the French Navy embarrassed in mid-March by use of the fitness app Strava?

*A young officer went for a run on March 13 either aboard the aircraft carrier Charles de Gaulle or one of its escort ships. He logged his run on his smartphone using the app Strava, which tracks location data and enabled the location of the Carrier Strike Group to be publicly identified.*

